Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 16:04:03 ON 03 AUG 2003

FILE COVERS 1907 - 3 Aug 2003 VOL 139 ISS 6
FILE LAST UPDATED: 1 Aug 2003 (20030801/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d all tot 16

L6 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:434447 HCAPLUS
DN 138:398357
TI Automated tissue staining system and reagent container
IN **Tseung, Ken K.; Rhett, Norman K.; Takayama, Glenn K.**; Wong, Wai Bun; Yuen, Delia P.
PA **Lab Vision Corporation, USA**
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM B01L003-00
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 47, 48
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003045560	A2	20030605	WO 2002-US37552	20021122
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003099573	A1	20030529	US 2001-994458	20011126
PRAI	US 2001-994458	A	20011126		
	US 2002-299290	A	20021119		

AB An automated staining system and a reagent container designed for use with the automated staining app. The reagent container includes a reagent containment section capable of contg. a vol. of a reagent. The reagent containment section includes an upper wall and a base wall that are spaced apart along an axis. The base wall includes a well having a nadir that is

aligned axially with an access opening in the upper wall so that a reagent probe entering the opening parallel to said axis will travel toward the nadir. In another aspect of the invention, the reagent container may include a two-dimensional data element contg. reagent information. The staining app. may include one removable drawer for holding reagent containers and another removable drawer holding slides.

ST automated tissue staining system reagent container

IT Computer program
Containers
High throughput screening
Human
Process automation
Robotics
Staining, biological
(automated tissue staining system and reagent container)

IT Sampling apparatus
(automated; automated tissue staining system and reagent container)

L6 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:411841 HCAPLUS

TI Automated tissue staining system and reagent container

IN **Tseung, Ken K.; Rhett, Norman K.; Takayama, Glenn K.**; Wong, Wai Bun; Yuen, Delia P.

PA **Lab Vision Corporation, USA**

SO U.S. Pat. Appl. Publ.
CODEN: USXXCO

DT Patent

LA English

IC ICM G01N001-31
ICS G01N001-30; G01N035-10

NCL 422063000; 436063000; 436043000; 436046000; 436174000; 422065000; 422067000; 422068100; 422082050; 422100000

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003099573	A1	20030529	US 2001-994458	20011126
	WO 2003045560	A2	20030605	WO 2002-US37552	20021122

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-994458 A 20011126
US 2002-299290 A 20021119

AB An automated staining system and a reagent container designed for use with the automated staining apparatus. The reagent container includes a reagent containment section capable of containing a volume of a reagent. The reagent containment section includes an upper wall and a base wall that are spaced apart along an axis. The base wall includes a well having a nadir that is aligned axially with an access opening in the upper wall so that a reagent probe entering the opening parallel to said axis will travel toward the nadir. In another aspect of the invention, the reagent container may include a two-dimensional data element containing reagent information. The staining apparatus may include one removable drawer for holding reagent containers and another removable drawer holding slides.

L6 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:638348 HCAPLUS
DN 137:152005
TI Method and apparatus for automatic tissue staining
IN **Rhett, Norman K.; Tseung, Ken K.; Corl, Mark V.**; Wong, Wai Bun; Le, Ngoc Van; **Takayama, Glenn K.**
PA **Lab Vision Corporation, USA**
SO U.S. Pat. Appl. Publ., 55 pp., Cont.-in-part of U.S. Ser. No. 133,292.
CODEN: USXXCO
DT Patent
LA English
IC ICM G01N033-50
NCL 702019000
CC 9-1 (Biochemical Methods)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002116132	A1	20020822	US 2001-10830	20011113
	US 5839091	A	19981117	US 1996-726702	19961007
	US 6349264	B1	20020219	US 1998-133292	19980812
PRAI	US 1996-726702	A1	19961007		
	US 1998-133292	A2	19980812		

AB To simplify the process of prepg. microscope slides, an advanced automatic staining app. is disclosed. The disclosed automatic staining app. comprises an electromech. automatic staining device that is coupled to a personal computer system using an interface card. An autostainer control program runs on the personal computer system. The autostainer control program allows a user to simply program the automatic staining app. using simple commands entered in the graphical user interface. The autostainer control program includes several features that simplify the programming such as safeguards that ensure compatible reagents are being used; automatic buffer soln. requirement calculator; and the ability to det. optimal staining procedure. The electromech. automatic staining device includes features such as dual waste bins for hazardous and nonhazardous waste storage, an automatic dispenser cleansing system; and unique slide clip that minimizes capillary effect.

ST app automatic tissue staining
IT Algorithm
Animal tissue
Biochemical molecules
Buffers
Cell
Process automation
Robotics
Staining, biological
(method and app. for automatic tissue staining)
IT Fluoropolymers, uses
RL: DEV (Device component use); USES (Uses)
(method and app. for automatic tissue staining)
IT Computers
(microcomputers; method and app. for automatic tissue staining)
IT Microscopes
(slides; method and app. for automatic tissue staining)
IT 9002-84-0, Teflon
RL: DEV (Device component use); USES (Uses)
(method and app. for automatic tissue staining)

L6 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:752288 HCAPLUS
DN 129:341433
TI Method and apparatus for automatic tissue staining
IN **Rhett, Norman K.; Tseung, Ken K.; Corl, Mark V.**; Wong, Wai Bun; Le, Ngoc Van
PA **Lab Vision Corp., USA**

SO U.S., 43 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N033-53
NCL 702019000
CC 9-1 (Biochemical Methods)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5839091	A	19981117	US 1996-726702	19961007
	US 6349264	B1	20020219	US 1998-133292	19980812
	US 2002116132	A1	20020822	US 2001-10830	20011113
PRAI	US 1996-726702	A1	19961007		
	US 1998-133292	A2	19980812		

AB To simplify the process of prepg. microscope slides, an advanced automatic staining app. is disclosed. The disclosed automatic staining app. comprises an electromech. automatic staining device that is coupled to a personal computer system using an interface card. An autostainer control program runs on the personal computer system. The autostainer control program allows a user to simply program the automatic staining app. using simple commands entered in the graphical user interface. The autostainer control program includes several features that simplify the programming such as safeguards that ensure compatible reagents are being used; automatic buffer soln. requirement calculator; and the ability to det. optimal staining procedure. The electromech. automatic staining device includes features such as dual waste bins for hazardous and nonhazardous waste storage, an automatic dispenser cleansing system; and unique slide clip that minimizes capillary effect.

ST app automatic tissue staining
IT Animal tissue
Buffers
Staining, biological
(method and app. for automatic tissue staining)
IT Computers
(microcomputers; method and app. for automatic tissue staining)
IT Microscopes
(slides; method and app. for automatic tissue staining)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Anon; WO 911335 1991
(2) Anon; WO 9201919 1992
(3) Anon; BioGenex, "Optimax Automated Cell Staining System"
(4) Anon; Biotek Solutions, "Automated Immunostaining Systems" 1993
(5) Anon; Sakura World Class Technology, "RSG-61 Hematology Slide Stainer" 1995
(6) Anon; Shandon Cadenza, "Automated Immunostainer" 1989, P1
(7) Beckman; Biomek 2000 Automated Workstation
(8) Bernstein; US 5355439 1994 HCAPLUS
(9) Bogen; US 5073504 1991
(10) Copeland; US 5654199 1997
(11) Hamilton; Microlab SPE
(12) Keefe; US 5573727 1996
(13) Klainer; US 5116759 1992 HCAPLUS
(14) Leica; Automated Tissue Staining for Immunohistochemistry 1992
(15) Louder; US 4141312 1979
(16) Matrix Technologies Corporation; Automated Sample Handling 1993
(17) Packard; Multiprobe Robotic Liquid Handling P8
(18) Rosys; Introduce a new philosophy into your laboratory!
(19) Tecan Us Inc; Progressing as One in Laboratory Automation
(20) Tseung; US 5439649 1995
(21) Ventana; Ventana in Situ Hybridization System 1994

```
=> fil wpix
FILE 'WPIX' ENTERED AT 16:05:09 ON 03 AUG 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE LAST UPDATED:          31 JUL 2003      <20030731/UP>
MOST RECENT DERWENT UPDATE:     200349        <200349/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS  <<<

>>> SLART (Simultaneous Left and Right Truncation) is now
    available in the /ABEX field. An additional search field
    /BIX is also provided which comprises both /BI and /ABEX <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d all abeq tech abex tot l27

L27  ANSWER 1 OF 5  WPIX  COPYRIGHT 2003 THOMSON DERWENT on STN
AN   2003-505173 [47]   WPIX
DNC  C2003-135033
TI   Automated staining apparatus for staining specimens
     carried on slides comprises reagent containers received in apertures of
     rack and each containing reagent and including upper wall, base wall and
     tubular side wall.
DC   B04 J04
IN   RHETT, N K; TAKAYAMA, G K; TSEUNG, K K;
     WONG, W B; YUEN, D P
PA   (VISI-N) LAB VISION CORP
CYC  102
PI   WO 2003045560 A2 20030605 (200347)* EN   35p    B01L003-00      <--
        RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
            MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
            RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA
            ZM ZW
     US 2003099573 A1 20030529 (200347)             G01N001-31      <--
ADT  WO 2003045560 A2 WO 2002-US37552 20021122; US 2003099573 A1
     US 2001-994458 20011126
PRAI US 2002-299290   20021119; US 2001-994458   20011126
IC   ICM  B01L003-00; G01N001-31
     ICS  G01N001-30; G01N035-10
AB   WO2003045560 A UPAB: 20030723
     NOVELTY - An automated staining apparatus for staining
     specimens carried on slides comprises:
          (a) tray for holding slides;
          (b) rack having apertures;
          (c) reagent containers received in the apertures and each containing
     a reagent and including an upper wall, base wall and tubular side wall;
     and
```

(d) **staining** head assembly having a selectively and controllably movable probe.

DETAILED DESCRIPTION - An automated **staining** apparatus for **staining** specimens carried on slides (12) comprises:

(a) tray for holding slides each carrying a tissue specimen;

(b) rack having apertures;

(c) reagent containers (50) received in the apertures and each containing a reagent and including an upper wall, base wall and tubular side wall interconnecting the base and upper walls, the upper wall spaced apart from the base wall along an imaginary line passing through the base and upper walls, the base wall having a concave well with a nadir and the upper wall having an access opening, the nadir and access opening being aligned with each other along the imaginary line; and

(d) **staining** head assembly having a selectively and controllably movable probe (38) capable of being positioned proximate selected reagent containers and entering the access openings in a direction parallel to the imaginary line and directed toward the nadir, the probe being operable for withdrawing a reagent volume from the reagent containers and depositing the reagent volume on the slides according to a **staining** protocol.

An INDEPENDENT CLAIM is also included for a method of operating an **autostainer** for **staining** a tissue specimen according to a **staining** protocol, that involves:

(i) providing a reagent container with a two-dimensional data storage element containing encoded reagent information;

(ii) reading the two-dimensional data storage element to interpret the reagent information;

(iii) specifying the **staining** protocol for the tissue specimen using the reagent information; and

(iv) **staining** the tissue specimen on the specimen slide according to the **staining** protocol.

USE - For **staining** specimens carried on slides.

ADVANTAGE - The automated **staining** apparatus has a reagent container that reduces the amounts of wasted reagents.

DESCRIPTION OF DRAWING(S) - The figure is a perspective view of an automatic **staining** apparatus with the lid removed.

Slides 12

Probe 38

Reagent container 50

Dwg.1/11

FS CPI

FA AB; GI

MC CPI: B11-C06; J04-B

TECH UPTX: 20030723

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Components: The upper wall includes a neck having a passageway extending parallel to the line, the access opening being provided in the neck and coextensive with the passageway. The base wall includes a spaced-apart pair of outwardly-projecting protrusions, each providing a contact point when the reagent container is placed on a planar surface.

L27 ANSWER 2 OF 5 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN **2002-327819** [36] WPIX

CR 1999-023972 [02]

DNN **N2002-257100** DNC **C2002-094682**

TI Apparatus used for **staining** glass slides for tissue specimen and cell preparation, has control program which stops just before unstable reagent phase and alerts user to create and provide needed unstable reagent to specimen slide.

DC B04 S03 T01

IN **CORL, M V**; LE, N V; **RHETT, N K**; **TSEUNG, K K**; WONG, W B

PA (**VISI-N**) **LAB VISION CORP**

CYC 1
PI US 6349264 B1 20020219 (200236)* 43p G01N033-53 <--
ADT US 6349264 B1 **Cont of US 1996-726702 19961007, US 1998-133292 19980812**
FDT US 6349264 B1 Cont of US 5839091
PRAI **US 1996-726702 19961007; US 1998-133292 19980812**
IC ICM **G01N033-53**
AB US 6349264 B UPAB: 20020610
NOVELTY - Apparatus has an **autostainer** control program (170) to control electrical commands to deliver a set of reagents to specimen slides each having a slide preparation protocol. The control program stops just before an unstable reagent phase and alerts a user to create and provide a needed unstable reagent.
USE - Used for **staining** tissue specimens and cell preparations.
ADVANTAGE - The tissue specimen **staining** process is simplified and is automated, so expensive human labor is eliminated and probability of an error occurring during **staining** process is reduced. A compatibility check feature prevents incompatible reagents from being used on the same slide.
DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of **autostainer** apparatus.
Autostainer control program 170
Dwg.1a/27
FS CPI EPI
FA AB; GI
MC CPI: B11-C09
EPI: S03-E13D; S03-E14H6; T01-J07B1

L27 ANSWER 3 OF 5 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-451886** [48] WPIX
DNN **N2001-334499** DNC **C2001-136550**
TI Operation of **autostainer** device for **staining** tissue specimens and cell preparations, involves using slide trays having specimen slides and associated reagent pack with identifier specifying preparation protocol.
DC B04 S03
IN **CORL, M V; RHETT, N K; TAKAYAMA, G; TSEUNG, K K**
PA **(VISI-N) LAB VISION CORP**
CYC 94
PI WO 2001051909 A1 20010719 (200148)* EN 46p G01N001-31 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001026345 A 20010724 (200166) G01N001-31 <--
EP 1247084 A1 20021009 (200267) EN G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
JP 2003519791 W 20030624 (200341) 47p G01N001-30 <--
CN 1404573 A 20030319 (200344) G01N001-31 <--
ADT WO 2001051909 A1 WO 2001-US512 20010108; AU 2001026345 A AU 2001-26345 20010108; EP 1247084 A1 EP 2001-900938 20010108, WO 2001-US512 20010108; JP 2003519791 W JP 2001-552071 20010108, WO 2001-US512 20010108; CN 1404573 A CN 2001-803764 20010108
FDT AU 2001026345 A Based on WO 200151909; EP 1247084 A1 Based on WO 200151909; JP 2003519791 W Based on WO 200151909
PRAI US 2000-483248 20000114
IC ICM **G01N001-31**
AB WO 200151909 A UPAB: 20010829

NOVELTY - Operating an **autostainer** device, comprises accepting a slide tray having specimen slides and a reagent pack associated with the specimen slide. The slide comprises a first identifier that specifies a particular slide preparation protocol for the specimen slide. The first identifier is read and the specimen slide is prepared according to the particular slide preparation protocol.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a specimen slide-**staining** apparatus comprising slide trays (700), an automatic **staining** head assembly for depositing reagents on the specimen slides and further comprising an input device for reading identifiers that specify slide preparation protocols to perform, a control system coupled to the automatic **staining** head assembly, a pause input for pausing the apparatus during the **staining** run, and a restart input for restarting after adding new specimen slides onto the slide trays;

(2) a slide rack comprising a first receptacle for accepting a specimen slide (710) and a second receptacle for accepting a reagent pack (720); and

(3) a reagent pack comprising a set of wells containing reagents for a specific slide preparation protocol, and an identifier (420) associated with the protocol.

USE - For operating an **autostainer** device for **staining** tissue specimens and cell preparations.

ADVANTAGE - The invention simplifies the operation of an automatic tissue-**staining** device.

DESCRIPTION OF DRAWING(S) - The figure shows a front view of a combined slide and reagent rack for preparing slides.

Identifier 420

Slide tray 700

Specimen slide 710

Reagent pack 720

Dwg.7A/9

FS CPI EPI

FA AB; GI

MC CPI: B11-C08C; B11-C08E; B12-K04

EPI: S03-E13D

TECH UPTX: 20010829

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Components: The reagent pack is associated with the specimen slide by being adjacent to the slide or by having a second identifier that is the same as the first. The reagent pack comprises a peel-off identifier containing the first identifier. The peel-off identifier is for placement on the slide.

ABEX UPTX: 20010829

EXAMPLE - No examples provided.

L27 ANSWER 4 OF 5 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN **1999-023972** [02] WPIX

DNN **N1999-018470** DNC **C1999-007244**

TI Apparatus for automatic tissue **staining** - using electromechanical **stainer** coupled to a personal computer system using interface card.

DC A89 B04 D16 J04 S03 S05 T01

IN **CORL, M V**; LE, N V; **RHETT, N K**; **TSEUNG, K K**; WONG, W B

PA (**VISI-N**) **LAB VISION CORP**

CYC 1

PI US 5839091 A 19981117 (199902)* 43p G01N033-53 <--

ADT US 5839091 A **US 1996-726702 19961007**

PRAI **US 1996-726702 19961007**

IC ICM **G01N033-53**

AB US 5839091 A UPAB: 20020610

An **autostainer** is programmed using a computer. Input from a user

is accepted to select a first reagent for a first slide. Further input is accepted from a user to select a second reagent. The two reagents are compared for compatibility. The user is warned if the reagents are incompatible. Also claimed is an apparatus for preparing slides. It has a delivery system for dispensing reagent onto the slides. A reservoir collects reagents washed off the slides. Pumps respectively removing hazardous and non-hazardous waste from the reservoirs. Also claimed is an apparatus for preparing slides which has a reagent rack for storing a number of reagents, a slide rack and a robotic motion control system. This has a probe for dispensing reagents from the rack onto the slides. It washes the probe in a washbin between the use of different reagents. Also claimed is a computer implemented method of programming a slide preparation apparatus. A grid is displayed comprising tiles on a computer display. A first axis corresponds to a set of slides, and a second corresponding to a set of protocol steps to be performed. Input from a user selects a particular tile. Edit information about the tile is displayed. Also claimed is an air nozzle with a pressurised air supply line and a head assembly with an internal well for equalising the air pressure. The assembly has a narrow slit that allows air to escape in a two dimensional fan spray pattern.

USE - The fully automated system **stains** tissue specimens and cell preparations.

ADVANTAGE - The programming of the **staining** apparatus is simplified.

Dwg.1a/27

FS CPI EPI
FA AB; GI
MC CPI: A12-L04; B11-C08; B11-C09; B12-K04A; D05-H08; D05-H09; J04-B01
EPI: S03-E13D1; S03-E14H4; S03-E14H6; S03-E15; S05-C03; T01-J06A; T01-J10B2

L27 ANSWER 5 OF 5 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1995-155348** [20] WPIX
DNN **N1995-122306**
TI Automated microscope slide **staining** appts. - has tip holder on X,Y movement arm that can access tip holders, reagent rack, slide rack and gas supply for washing or blowing operations.
DC S03 S05 T01
IN JONES, C M; KALRA, K L; **TSEUNG, K**; WONG, W; **TAKAYAMA, G K**; WONG, W B
PA (BIOG-N) BIOGENEX LAB
CYC 19
PI WO 9510035 A2 19950413 (199520)* EN 40p G01N000-00 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: JP
US 5439649 A 19950808 (199537) 22p B01L011-00
WO 9510035 A3 19950601 (199616) G01N000-00 <--
EP 722363 A1 19960724 (199634) EN B01L011-00
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
EP 722363 A4 19961211 (199721) G01N000-00 <--
JP 09503304 W 19970331 (199723) 44p G01N001-30 <--
EP 722363 B1 19990414 (199919) EN B01L011-00
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
DE 69417908 E 19990520 (199926) B01L011-00
ADT WO 9510035 A2 WO 1994-US11090 19940929; US 5439649 A US 1993-129243 19930929; WO 9510035 A3 WO 1994-US11090 19940929; EP 722363 A1 EP 1994-929964 19940929, WO 1994-US11090 19940929; EP 722363 A4 EP 1994-929964 ; JP 09503304 W WO 1994-US11090 19940929, JP 1995-510911 19940929; EP 722363 B1 EP 1994-929964 19940929, WO 1994-US11090 19940929; DE 69417908 E DE 1994-617908 19940929, EP 1994-929964 19940929, WO 1994-US11090 19940929
FDT EP 722363 A1 Based on WO 9510035; JP 09503304 W Based on WO 9510035; EP 722363 B1 Based on WO 9510035; DE 69417908 E Based on EP 722363, Based on

WO 9510035
PRAI US 1993-129243 19930929
REP 1.Jnl.Ref; US 4042999; US 4224277; US 4305722; US 5009185; US 5225325; US 5231029; DE 3805808; EP 255057; EP 321889; US 4030341; US 4308822; WO 9201919; WO 9303451; No-SR.Pub
IC ICM B01L011-00; **G01N000-00; G01N001-30**
ICS **G01N035-10**
AB WO 9510035 A UPAB: 19950530
The automated microscope-slide-**staining** appts includes a moving arm operating on various locations. The moving arm (30) has a home position over a drain bin (26) for disposing of tips and waste. It is mounted on a an X-axis track (32) that runs on shafts for Y-axis movement.

In front of the drain bin is a removable container (92) of disposable pipette tips. Adjacent to the tip box is a reagent rack (120) that can be removed for filling elsewhere. A wash/blow tip (70) and holder (80) is located to the rear of this. Slide trays (140) over heating blocks (200) and drain pan lie beside this.

USE/ADVANTAGE - Microscope examination of **unstained** cell and tissue preparation. Provides appts for automatically **staining** microscope slides with economy of materials.

Dwg.1/12
FS EPI
FA AB; GI
MC EPI: S03-E04R; S03-E13D; S03-E14H6; S03-E14H9; S03-E15; S05-C09; T01-J06A
ABEQ US 5439649 A UPAB: 19950921
The automated microscope-slide-**staining** appts. has a supporting frame having an attached arm moveable in three dimensions, and an appts. for moving the arm. A hollow tip head is located on the arm, and a gas supply unit alternatively supplies positive or negative gas pressure to it. A removable wash/blow tip has an exit slit, and is removably attached to the hollow tip head by a preselected arm movement. A reagent application tip holder is positioned at a second fixed location on the frame for holding a reagent application tip, which is removably attached to the hollow tip head. A reagent container holder is located at a third fixed location on the frame.

A microscope slide holder, at a fourth fixed location on the frame, removably contains the microscope slide. A controller adjusts movement of the arm, and the tip head picks up the wash/blow tip or the reagent application tip in response to arm movement and moves to one or more of the locations to pick up a reagent in the reagent container or dispense the reagent on the slide.

ADVANTAGE - Easily programmable to allow automated **staining** of individual slides with different techniques. Minimises waste.
Dwg.3/12

=> d all abeq tech abex tot 130

L30 ANSWER 1 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1997-401855 [37] WPIX
CR 1991-281595 [38]; 1997-107522 [10]; 1997-384677 [35]; 1997-401856 [37]; 2001-374266 [39]; 2002-194906 [25]; 2002-412948 [44]; 2002-626276 [67]; 2003-312262 [30]
DNN N1997-334274
TI Rinsing method for slide having tissue sample positioned on its' upper surface, e.g. for immunostaining and ELISA - applying layer of rinse liquid between sample and proximal end slide upper surface and sweeping layer of rinse liquid off slide using gas stream.
DC S03
IN COPELAND, K G; GROGAN, T M; MILLER, P C; RICHARDS, W L; SHOWALTER, W A
PA (VENT-N) VENTANA MEDICAL SYSTEMS INC
CYC 1

PI US 5654199 A 19970805 (199737)* 51p G01N001-38 <--
ADT US 5654199 A CIP of US 1990-488601 19900302, Cont of WO 1991-US1149 19910228, Cont of US 1992-924052 19920831, Div ex US 1994-352966 19941209, US 1995-474359 19950606
FDT US 5654199 A Div ex US 5595707
PRAI WO 1991-US1149 19910228; US 1990-488601 19900302; US 1992-924052 19920831; US 1994-352966 19941209; US 1995-474359 19950606
IC ICM G01N001-38
AB US 5654199 A UPAB: 20030513
The method comprises applying a layer of rinse liquid onto one or more rinse liquid impact zones positioned between the tissue sample and a proximal end of the upper surface of the slide to form a layer of rinse liquid which covers the tissue sample and

sweeping the layer of rinse liquid off of the slide using a gas stream.

The slide is in the horizontal position and the gas stream impacts the slide in the liquid impact zones at an angle such that the rinse liquid is removed from the slide.

USE/ADVANTAGE - Automated immunostaining of tissue section, in-situ DNA analysis and immunoassays such as ELISA. Can be used to process a large number of samples such as tissue sections mounted on slide surfaces using agents and protocols preselected by operator, while maintaining slide surfaces in horizontal plane throughout the incubation cycles. Employs computer control for positioning reagent and slide support carousel, so different reagent treatments can be individually performed for tissue samples. The provision of bar code readers permits tracking of each tissue sample as well as a record of the reagents applied.
Dwg.12/34
FS EPI
FA AB; GI
MC EPI: S03-E14H4; S03-E14H6; S03-E15

L30 ANSWER 2 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1993-386710 [48] WPIX
DNN N1993-298580 DNC C1993-172068
TI Automatic appts. for staining tissue slide specimens - has microprocessor controlling movement of slide racks through baths using programmed schedules.
DC B04 J04 S03
IN KEEFE, R; KEEFE, R A
PA (AUBI-N) AUSTRALIAN BIOMEDICAL CORP
CYC 44
PI WO 9323732 A1 19931125 (199348)* EN 24p G01N001-30
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US VN
AU 9340514 A 19931213 (199413) G01N001-30
EP 640209 A1 19950301 (199513) EN G01N001-30
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
EP 640209 A4 19951025 (199620) G01N001-30
AU 671276 B 19960822 (199642) G01N001-30
JP 08500434 W 19960116 (199642) 24p G01N001-30
US 5573727 A 19961112 (199651) 13p B05C003-02 <--
ADT WO 9323732 A1 WO 1993-AU219 19930513; AU 9340514 A AU 1993-40514 19930513; EP 640209 A1 EP 1993-909668 19930513, WO 1993-AU219 19930513; EP 640209 A4 EP 1993-909668 ; AU 671276 B AU 1993-40514 19930513; JP 08500434 W JP 1993-519711 19930513, WO 1993-AU219 19930513; US 5573727 A WO 1993-AU219 19930513, US 1995-331662 19950313
FDT AU 9340514 A Based on WO 9323732; EP 640209 A1 Based on WO 9323732; AU 671276 B Previous Publ. AU 9340514, Based on WO 9323732; JP 08500434 W Based on WO 9323732; US 5573727 A Based on WO 9323732
PRAI AU 1992-2401 19920513
REP GB 2009401; JP 02167473; JP 04279838; JP 63208761; EP 323130; GB 2196428;

WO 9221953; WO 9303451
IC ICM B05C003-02; G01N001-30
ICS G01N033-52; G01N035-02
AB WO 9323732 A UPAB: 19940120
Appts. has baths (20) holding chemicals and located in a casing (12) a system (22-26) for moving slide racks (21) between the baths, and a control microprocessor programmeable with different staining schedules and with logic such that multiple schedules can operate simultaneously, and pref. allowing additional schedules to be commenced without disrupting currently operating schedules.

The casing pref. has two access drawers (16, 17) for inserting and removing racks at the start and end of the treatment, the schedules containing information on the allowable limits of immersion times. The microprocessor can pref. delay the start of a new programme if it determines that this will conflict with an already operating programme.

ADVANTAGE - Permits more efficient, reliable and flexible processing.
Dwg.1/6
FS CPI EPI
FA AB; GI
MC CPI: B04-B04G; B04-B04H; B11-C08E; B12-K04A; J04-B01
EPI: S03-E13D; S03-E14H6; S03-E15A
ABEQ US 5573727 A UPAB: 19961219
Automatic tissue staining apparatus for staining tissue slide specimens comprises a housing including a closeable cover assembly, a plurality of slide racks each containing a plurality of individual slides containing specimens, a plurality of baths each containing chemicals for treating said specimens, means for moving a said slide rack from one of said plurality of baths to another of said plurality of baths, and a control system including a programmable microprocessor, said control system including means for inputting a schedule of said baths, thereby defining a programmed staining schedule and for selecting a programmed staining schedule for a slide rack inserted into said apparatus, said control system providing selectable control over said moving means to control slide rack movement through a programmed sequence through said plurality of baths, defined by said staining schedule, said microprocessor being programmable to iteratively determine movement timing of each slide rack within said plurality of slide racks whereby multiple schedules of movement of various ones of said plurality of slide racks can operate simultaneously, means for inputting additional slide racks and means for withdrawing processed slide racks, said control system further including means for indicating the insertion of additional slide racks into said apparatus and the withdrawal of slide racks from said apparatus, said control system including means for establishing a staining schedule for each slide rack and for reestablishing the staining schedule when a slide rack is inserted into or removed from said apparatus.
Dwg.1/6

L30 ANSWER 3 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1993-076739 [09] WPIX
CR 1996-049315 [05]
DNN N1993-058946
TI Automated tissue assay system for pathological analysis and testing - uses robotic arm to move sample to different processing stations and processor to select and optimise movement of sample.
DC S03 S05 T01
IN BERNSTEIN, S A; ERICKSON, P A
PA (BIOT-N) BIOTEK SOLUTIONS INC; (BIOT-N) BIO TEK INSTR; (BERN-I) BERNSTEIN S A; (ERIC-I) ERICKSON P A
CYC 18
PI WO 9303451 A1 19930218 (199309)* EN 80p G06F015-46
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE
W: JP
EP 600939 A1 19940615 (199423) EN 1p G06F015-46

R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL SE
US 5355439 A 19941011 (199440) 25p G06F009-00 <--
EP 600939 A4 19960515 (199643) G06F015-46
JP 08506888 W 19960723 (199650) 84p G01N035-02
US 5675715 A 19971007 (199746) 25p G06F009-00
US 5930461 A 19990727 (199936)# G05B013-00
EP 600939 B1 19991020 (199948) EN G06F019-00
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL SE
DE 69230177 E 19991125 (200002) G06F019-00

ADT WO 9303451 A1 WO 1992-US6478 19920804; EP 600939 A1 EP 1992-916866 19920804, WO 1992-US6478 19920804; US 5355439 A US 1991-740285 19910805; EP 600939 A4 EP 1992-916866 ; JP 08506888 W WO 1992-US6478 19920804, JP 1993-503806 19920804; US 5675715 A Cont of US 1991-740285 19910805, US 1994-218143 19940324; US 5930461 A Cont of US 1994-218143 19940324, US 1997-941507 19970930; EP 600939 B1 EP 1992-916866 19920804, WO 1992-US6478 19920804; DE 69230177 E DE 1992-630177 19920804, EP 1992-916866 19920804, WO 1992-US6478 19920804

FDT EP 600939 A1 Based on WO 9303451; JP 08506888 W Based on WO 9303451; US 5675715 A Cont of US 5355439; US 5930461 A Cont of US 5675715; EP 600939 B1 Based on WO 9303451; DE 69230177 E Based on EP 600939, Based on WO 9303451

PRAI US 1991-740285 19910805; US 1994-218143 19940324; US 1997-941507 19970930

REP No-SR.Pub; 1.Jnl.Ref; US 4727494; WO 8706008

IC ICM G01N035-02; G05B013-00; G06F009-00; G06F015-46; G06F019-00
ICS G01N001-28; G01N033-48; G05B019-02; G05B019-418

AB WO 9303451 A UPAB: 20000112
The system performs several independent analysis procedures simultaneously involving different types of tissues and differing process steps. It comprises a robotic arm (10), which can move the arm among several processing stations and a processor (15) which can select the next tissue to move, when to move it and where to move it to. The processor directs the robotic arm to interleave the different processing steps.

The processing stations are disposed in a set of grid locations (12) and may comprise work stations (13) for performing individual steps of the tissue assay procedures, such as soln. trays. The processor selects a tissue sample to be moved in response to timing information about the procedures and will also optimise the order in which samples are moved.

USE/ADVANTAGE - Automatic pathological analysis of tissue samples to aid in diagnosis of illness by pathologists and to provide informtion to medical researchers. Minimises time required to complete procedures.
Dwg.2/9

FS EPI
FA AB; GI
MC EPI: S03-E14H6; S03-E15; S05-C09; T01-J07B

ABEQ US 5355439 A UPAB: 19941128
The tissue assay system comprises a robotic arm and a processor, which may direct the robotic arm to interleave the differing process steps. The processor may select a tissue sample to be moved in response to timing information about the procedures, which may specify the start time and end time of each process step. The specified times may be exact or may be a range of times. The processor may determine the exact time for a step by generating a possible sequence of steps and examining that sequence for conflicts, adjusting that sequence in response to those steps with a specified range of times, and iterating the calculation over several possible sequences.

The processor may also optimise the order in which samples are moved to minimise the total time required by the system to complete the procedures, e.g. by generating several possible sequences, evaluating each sequence for total expected time, and selecting the best sequence available. The processor may comprise a graphic interface by which an operator may specify the steps of a procedure.
Dwg.2/9

ABEQ US 5675715 A UPAB: 19971119
A system for performing a plurality of independent analysis procedures simultaneously, each said procedure having a sample and at least one process step for operating on that sample, said at least one process step having a variable duration, said system comprising

a robotic device for causing a next process step to be performed on a selected sample; and

a processor for selecting, at a plurality of times, said next process step, and for directing an action for said robotic device whereby by said next process step is performed; said processor having means for directing said robotic device to interleave the process steps of said plurality of independent analysis procedures so as to conform to said variable duration for said at least one process step.
Dwg.2/8

L30 ANSWER 4 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1992-065036 [08] WPIX
DNN N1992-048882 DNC C1992-029850
TI Automatic tissue staining appts. for immuno histochemical processing - has slide-supporting rotatable carousel and adjustable fluid delivery head.
DC B04 J04 P42 S03
IN BAXTER, G L; HEALEY, K
PA (AUBI-N) AUSTRALIAN BIOMEDICAL CORP; (AUBI-N) AUST BIOMED CORP LT
CYC 26
PI WO 9201919 A 19920206 (199208)* <--
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: AU BG CA FI HU JP KR NO PL RO SU US
AU 9177541 A 19920218 (199222) G01N001-28
EP 539379 A1 19930505 (199318) EN 17p G01N001-28
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
AU 644876 B 19931223 (199407) G01N001-28
JP 06504115 W 19940512 (199423) 9p G01N033-53
EP 539379 A4 19930602 (199526)
US 5425918 A 19950620 (199530) 9p G01N001-31
ADT AU 9177541 A AU 1991-77541 19910429, WO 1991-AU170 19910429; EP 539379 A1 EP 1991-908695 19910429, WO 1991-AU170 19910429; AU 644876 B AU 1991-77541 19910429; JP 06504115 W JP 1991-508100 19910429, WO 1991-AU170 19910429; EP 539379 A4 EP 1991-908695 ; US 5425918 A Div ex US 1993-960358 19930119, US 1993-151826 19931115
FDT AU 9177541 A Based on WO 9201919; EP 539379 A1 Based on WO 9201919; AU 644876 B Previous Publ. AU 9177541, Based on WO 9201919; JP 06504115 W Based on WO 9201919
PRAI AU 1990-1231 19900718
REP 2.Jnl.Ref; CH 421009; DE 3805808; DE 829040; DE 908600; FR 948056; GB 1366581; JP 55084568; JP 59049860; US 3368872; US 3574064; US 4613079; US 4801093; US 4837159; US 4847208; FR 2288977; FR 816143; US 4089989
IC ICM G01N001-28; G01N001-31; G01N033-53
ICS B05B001-34; G01N001-30; G01N033-533
ICA G01N035-04
AB WO 9201919 A UPAB: 19931006
Appts. includes a sample support and a dispenser for delivering washing fluid onto the sample. Additionally, a slide clearing facility is provided together with a nozzle for dispensing agent onto the sample.

The sample is held on a slide supported on a rotatable carousel with a head assembly movable relative to the slide and adapted to dispense fluid.

Appts. includes a carousel (16) carrying slides (24) around its periphery and reagent containers (26) nearer to its axis. Delivery head (18) moves across the dia. of the carousel. A combined rotational movement of the carousel and translational movement of the head enables nozzles (20,22) to direct material onto any part of any slide (24) or to any container (26). Pref. a third, wash fluid delivery, nozzle is also mounted on the head (18). Pref. each nozzle can move vertically relative to the

assembly. The appts. permits automatically controlled delivery sequences to be carried out.

USE/ADVANTAGE - The appts. may be used to automatically stain tissue sections or cell preparations. The appts. replaces manual techniques. 2/17

FS CPI EPI GMPI
FA AB; GI
MC CPI: B04-B04A; B11-C08C; B12-K04; J04-B01
EPI: S03-E13D; S03-E13D1
ABEQ EP 539379 A UPAB: 19931112
Appts. includes a sample support and a dispenser for delivering washing fluid onto the sample. Additionally, a slide clearing facility is provided together with a nozzle for dispensing agent onto the sample.

The sample is held on a slide supported on a rotatable carousel with a head assembly movable relative to the slide and adapted to dispense fluid.

Appts. includes a carousel (16) carrying slides (24) around its periphery and reagent containers (26) nearer to its axis. Delivery head (18) moves across the dia. of the carousel. A combined rotational movement of the carousel and translational movement of the head enables nozzles (20,22) to direct material onto any part of any slide (24) or to any container (26). Pref. a third, wash fluid delivery, nozzle is also mounted on the head (18). Pref. each nozzle can move vertically relative to the assembly. The appts. permits automatically controlled delivery sequences to be carried out.

USE/ADVANTAGE - The appts. may be used to automatically stain tissue sections or cell preparations. The appts. replaces manual techniques.

ABEQ US 5425918 A UPAB: 19950804
The appts. has a body with a rotating carousel (16) for a number of slides (24) with the tissue samples. The delivery head (18), with a clear (20) and a spray (22) nozzle, moves across the carousel (16) dia..

The spray nozzle (22), to deliver a biochemical agent to the slide (24), has an eddy chamber to take the fluid flow from the nozzle body concentric to the chamber axis to pass out through an outlet to minimise damage to the agent.

ADVANTAGE - The appts. gives an automatic tissue staining action, without the need for manual operation.
Dwg.2/17

L30 ANSWER 5 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1992-041652 [05] WPIX
DNN N1992-031989 DNC C1992-018300
TI Reservoir chemical sensors with optional removable reservoir cells - comprising modular reservoir cell body contg. sensing reagent, communications means, light source, detector and adaptor.
DC A89 B04 D16 E19 S03 S05
IN BUTLER, M S; KLAINER, S M; THOMAS, J R
PA (FIBE-N) FIBERCHEM INC
CYC 18
PI WO 9200515 A 19920109 (199205)* C12M001-16
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: CA JP KR
US 5107133 A 19920421 (199219) 13p
US 5116759 A 19920526 (199224) 24p C12M001-40 <--
EP 536283 A1 19930414 (199315) EN G01N021-57
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 06500627 W 19940120 (199408) 28p G01N021-77
EP 536283 A4 19930526 (199526) C12M001-16
ADT US 5107133 A US 1990-576604 19900831; US 5116759 A US 1990-544681 19900627; EP 536283 A1 EP 1991-912781 19910613, WO 1991-US4214 19910613; JP 06500627 W JP 1991-512087 19910613, WO 1991-US4214 19910613; EP 536283 A4 EP 1991-912781
FDT EP 536283 A1 Based on WO 9200515; JP 06500627 W Based on WO 9200515

PRAI US 1990-544681 19900627; US 1990-576604 19900831
REP US 4003707; US 4810658; US 4865995; US 4954318; DE 2948904; EP 190111; EP 284513; US 4372915; US 4440497; US 4892383
IC ICM C12M001-16; C12M001-18; C12M001-40; G01N021-57; G01N021-77; G01N031-22
ICS C12M001-34; G01N015-06; G01N021-17; G01N033-543
AB WO 9200515 A UPAB: 19931006
A reservoir chemical sensor comprises (a) a modular reservoir cell body; (b) a sensing reagent in the cell body; (c) species communications means formed in the cell body for passing a species of interest into the cell body to interact with the sensing reagent; (d) a light source at one end of the cell body to illuminate the interior; (e) detector at the opposite end of the cell body to detect the effects of interaction of species and sensing reagent; and (f) an adapter means at each end of the cell for mounting and aligning the light source and detector.

A similar chemical sensor comprises a removable reservoir cell which fits snugly into a reservoir cell channel on the sensor body.

USE/ADVANTAGE - The invention provides reservoir sensors for detecting and quantifying (i) inorganic species such as cations, anions and non-ionic species including the differentiation between valence states such as Cr3+ and Cr6+ and Fe2+ and Fe3+; (ii) organic species and pharmaceutical prods. such as cpds., structures and functional gps. including the differentiation between isomers and homologs; and (iii) biological species such as cpds. of clinical interest, viruses, bacteria, antigens and enzymes. It also provides for counting and sizing particles in liq. systems (claimed) and for measuring pH (claimed). The system encompasses a wide range of light interaction techniques and a large number of sensing chemistries. The design allows for the sensing agent to be removed, the cell cleaned and new sensing material added automatically without contamination of sample or surrounding area. Different replaceable reservoir cells can be easily inserted and removed from the sensor body. 1/27
FS CPI EPI
FA AB; GI; DCN
MC CPI: A12-L02A; A12-L04; B04-B02B1; B04-B02B4; B04-B02C4; B04-B04D5; B05-A01B; B05-A03; B05-B02B; B05-B02C; B05-C03; B05-C07; B05-C08; B10-D01; B10-H02F; B10-J02; B11-C07B2; B11-C08B; B12-K04; D05-H04; D05-H06; D05-H09; E10-A15F; E10-E04; E10-H02
EPI: S03-E04B1; S05-C09
ABEQ US 5107133 A UPAB: 19931006
Reservoir chemical sensor comprises a cell channel (8) formed in a miniaturised sensor body (2) to snugly receive a removable cell (5), and a diode illumination source (3) mounted in a passage (9) in the body around the channel for inputting optical signals into the cell. At least one photodiode detector (4) is mounted in a second passage in the body around and communicating with the channel to detect signals from the cell.

The cell may be made of glass, quartz or plastic, and the source and detector may be arranged face-to-face, orthogonally or there may be two detectors, one linearly with the source and the other orthogonal. There may be a dichroic mirror or a beam splitter in the cell to pass signals to the detectors.

ADVANTAGE- Permits easy exchange of sensing reagent.
ABEQ US 5116759 A UPAB: 19931006
A reservoir chemical sensor comprises (i) a modular reservoir cell body made of acetal thermoplastic polymer; (ii) a sensing reagent in the cell body; (iii) species communication means formed in the cell body for passing a species of interest into the cell body to interact with the sensing reagent; (iv) a light source positioned at one end of the cell body to illuminate the interior of cell body; (v) a detector positioned at an opposed end of the cell body to detect effects produced by interaction of the species of interest with sensing reagent; (vi) an adaptor means at each end of the cell for mounting and aligning the light source and detector to the cell body.

USE/ADVANTAGE - Method gives improved reservoir chemical sensors i.e. for alcohol, drugs, organic halides, cyanide and inorganic ions.

L30 ANSWER 6 OF 6 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1978-88037A [49] WPIX
TI Histological tissue sample treatment - in single container by program controlled addition and discharge of all treatment fluids.
DC B04 J04 S03 S05
IN CUOMO, C E; LOUDER, N M
PA (FISH-N) FISHER SCI CO
CYC 5
PI DE 2739649 A 19781130 (197849)*
FR 2391463 A 19790119 (197908)
US 4141312 A 19790227 (197910) <--
GB 1569459 A 19800618 (198025)
CH 626173 A 19811030 (198146)
PRAI US 1977-797366 19770516
IC G01N001-28; G01N033-16
AB DE 2739649 A UPAB: 19930901
Plant for the automatic treatment of histological tissue samples consists of a single container for the samples in which all operations (fixing, dewatering, purificn., embedding) are carried out. A vacuum pump and a bank of valves admit and discharge in turn all treatment fluids. A program control module governs the choice of the fluids and their retention time.
Plant has 2 to 3 times the capacity of conventional plants.
It includes controls of the degree of vacuum and of the temp. The personnel is not exposed to toxic substances. The state of the automatic process can be indicated by a mimic display panel.
FS CPI EPI
FA AB
MC CPI: B04-B04E; B11-C09; J04-B01

=> d all abeq tech tot 148

L48 ANSWER 1 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-478489 [45] WPIX
DNN N2003-380321 DNC C2003-127653
TI Staining for use in manual laboratory, uses sample slides which remain attached to staining device during staining procedure.
DC B04 D16 S03
IN CONTANT, M
PA (CONT-I) CONTANT M
CYC 1
PI NL 1018976 C6 20030319 (200345)* 7p G01N001-31 <--
ADT NL 1018976 C6 NL 2001-1018976 20010918
PRAI NL 2001-1018976 20010918
IC ICM **G01N001-31**
ICS **G01N001-30**
AB NL 1018976 C UPAB: 20030716
NOVELTY - Staining comprising microscope slides (6) for samples (5) which remain physically attached to the device during the staining procedure, is new.
DETAILED DESCRIPTION - A device and a method for carrying out staining of a material in a manual laboratory as part of a histological, cytological, bacteriological, hermatological or immunological process uses an electronic system for advising the operative as to which reagents the device with the microscope slides with the material to be stained on them should be placed in during a given time period. The slides remain physically attached to the device.
USE - The device is useful for staining of a material in a manual laboratory.

ADVANTAGE - The laboratory operative is made to follow the correct staining protocol.

DESCRIPTION OF DRAWING(S) - Figure 1 shows a perspective view of the staining apparatus.

Display 1

Indicators 2

Switch 3

Coupling mechanism for attaching material to be stained to microscope slide 4

Material to be stained 5

Microscope slide 6

Socket for e.g. recharging battery and/or providing power supply 7

Infra-red transmiter/receiver device 8

Barcode scanner 9

Loudspeaker 10

Dwg.1/3

FS CPI EPI

FA AB; GI

MC CPI: B11-C07A; B11-C08G; D05-H; D05-H09

EPI: S03-E13D

TECH UPTX: 20030716

TECHNOLOGY FOCUS - MECHANICAL ENGINEERING - The coupling mechanism (4) for attaching the slides to the device only makes physical contact with the upper 20 mm of the slides.

L48 ANSWER 2 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN **2002-406654** [44] WPIX

DNN **N2002-319269**

TI Laboratory assembly to dye cytological or histological preparations monitors reagents over extended period.

DC S03

IN ECKERT, R; GROPP, R

PA (LEIC-N) LEICA MICROSYSTEMS GMBH; (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH

CYC 5

PI	DE 10052833	A1 20020425 (200244)*	4p	G01N001-28	
	GB 2368397	A 20020501 (200244)		G01N001-31	<--
	JP 2002181676	A 20020626 (200246)	5p	G01N001-30	<--
	US 2002090730	A1 20020711 (200248)		G01N035-00	<--
	CN 1350171	A 20020522 (200258)		G01N001-28	
	GB 2368397	B 20021211 (200282)		G01N001-31	<--

ADT DE 10052833 A1 DE 2000-10052833 20001024; GB 2368397 A GB 2001-23898 20011004; JP 2002181676 A JP 2001-325948 20011024; US 2002090730 A1 US 2001-4138 20011023; CN 1350171 A CN 2001-137137 20011024; GB 2368397 B GB 2001-23898 20011004

PRAI DE 2000-10052833 20001024

IC ICM G01N001-28; **G01N001-30**; **G01N001-31**; **G01N035-00**

AB DE 10052833 A UPAB: 20020711

NOVELTY - In a laboratory process to treat cytological or histological preparations in e.g. an automated dye assembly, the test items are transported on slides and in magazines to a series of work stations where they are treated in accordance with pre-programmed and selected sequences. The process incorporates especially an automated system to monitor the presence and condition of usable reagents within pre-determined parameters.

USE - Laboratory assembly to dye cytological or histological preparations.

ADVANTAGE - The assembly produces consistent results over an extended period.

DESCRIPTION OF DRAWING(S) - The drawing shows a work station screen presentation in which the presence of reagents is indicated by color bars (Drawing includes non English-language text).

Dwg.1/1
FS EPI
FA AB; GI
MC EPI: S03-E13D1; S03-E14H6; S03-E15

L48 ANSWER 3 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-383818** [42] WPIX
DNC **C2002-108196**
TI Immuno histochemistry laboratory staining tray consists of a casing with sheets separating the individual reagents, and a transparent viewing lid.
DC B04 D16 P81 S03
IN BARRIONUEVO DE MEDEIROS, C R
PA (MEDE-I) BARRIONUEVO DE MEDEIROS C R
CYC 1
PI BR 2000003790 A 20020102 (200242)* 1p G01N001-31 <--
ADT BR 2000003790 A BR 2000-3790 20000517
PRAI BR 2000-3790 20000517
IC ICM **G01N001-31**
ICS G02B021-34
AB BR 200003790 A UPAB: 20020704
NOVELTY - The immuno histochemistry laboratory staining tray comprises a casing (1) with a reagent tank (2), and reagents (4) with separation sheets (3) between them. The tray has a transparent lid (not shown).
USE - In instrumentation.
Dwg.1/1
FS CPI EPI GMPI
FA AB; GI
MC CPI: B11-C08E; D05-H09
EPI: S03-E13D

L48 ANSWER 4 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-282125** [33] WPIX
DNN **N2002-220288**
TI Handling apparatus for cytological or histological preparations has feed stations and/or removal stations allocated to several processing stations.
DC P81 S03
IN DORENKAMP, C; KAEPPLEIN, A; KUENKEL, S; THIEM, S; KAPPLEIN, A
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 5
PI DE 10041230 A1 20020307 (200233)* 5p G01N001-28
US 2002051735 A1 20020502 (200234) G01N035-00 <--
GB 2368395 A 20020501 (200237) G01N001-31 <--
JP 2002122605 A 20020426 (200244) 6p G01N035-02 <--
CN 1339697 A 20020313 (200245) G01N001-31 <--
GB 2368395 B 20021030 (200279) G01N001-31 <--
ADT DE 10041230 A1 DE 2000-10041230 20000822; US 2002051735 A1 US 2001-932900 20010820; GB 2368395 A GB 2001-18349 20010727; JP 2002122605 A JP 2001-250943 20010822; CN 1339697 A CN 2001-125774 20010822; GB 2368395 B GB 2001-18349 20010727
PRAI DE 2000-10041230 20000822
IC ICM G01N001-28; **G01N001-31; G01N035-00; G01N035-02**
ICS **G01N001-30; G01N035-04;** G02B021-24
AB DE 10041230 A UPAB: 20020524
NOVELTY - The apparatus includes several processing stations (2) and a conveying device (4). A feed station (6) and/or a removal station (7) can be allocated to a predetermined number of processing stations, in a fixed or variable arrangement. The feed station and/or removal station may be allocated to up to four processing stations.
USE - For supplying objects into e.g. dying machine.
ADVANTAGE - Allows the handling to be speeded up, without regard to the feed or removal.
DESCRIPTION OF DRAWING(S) - The drawing shows feed and removal

stations in the form of drawers.
Conveying device 4
Feed station 6
Removal station 7
Dwg.1/1
FS EPI GMPI
FA AB; GI
MC EPI: S03-E13D

L48 ANSWER 5 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-282124** [33] WPIX
DNN **N2002-220287**
TI Handling apparatus for cytological or histological preparations has region which receives modular processing stations.
DC P81 S03
IN DALKIDIS, C; SCHECK, P; THIEM, S
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 5
PI DE 10041229 A1 20020307 (200233)* 11p G01N001-28
GB 2366374 A 20020306 (200233) G01N001-31 <--
US 2002054829 A1 20020509 (200235) G01N035-04
JP 2002122606 A 20020426 (200244) 9p G01N035-02
CN 1339695 A 20020313 (200245) G01N001-31 <--
GB 2366374 B 20021030 (200279) G01N001-31 <--
ADT DE 10041229 A1 DE 2000-10041229 20000822; GB 2366374 A GB 2001-18881 20010802; US 2002054829 A1 US 2001-933415 20010820; JP 2002122606 A JP 2001-250948 20010822; CN 1339695 A CN 2001-125772 20010822; GB 2366374 B GB 2001-18881 20010802
PRAI DE 2000-10041229 20000822
IC ICM G01N001-28; **G01N001-31**; G01N035-02; G01N035-04
ICS G01N033-48; G02B021-24
ICA **G01N001-30**
AB DE 10041229 A UPAB: 20020524
NOVELTY - The apparatus includes several processing stations (3) arranged in a housing (2), and a conveying device (5) for supplying or removing objects or object carriers (4) into the processing stations. A region (9) allocated to the processing stations (4) receives modular processing stations (10) with fixed functions.
USE - For supplying objects into e.g. dying machine.
ADVANTAGE - Increased flexibility.
DESCRIPTION OF DRAWING(S) - The drawing shows an opened dying machine.
Processing stations 3
Conveying device 5
Modular processing station 10
Dwg.1/6
FS EPI GMPI
FA AB; GI
MC EPI: S03-E13D

L48 ANSWER 6 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-156711** [21] WPIX
DNN **N2002-119268** DNC **C2002-049004**
TI Staining equipment for performing microscopic slide staining, includes washing and staining group comprising sealing trays capable of cooperating with slide holding tray to define reagent application areas.
DC B04 J04 S03
IN GIODICE, A
PA (MEDI-N) MEDIC SRL
CYC 25
PI EP 1174702 A1 20020123 (200221)* EN 18p G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

ADT EP 1174702 A1 EP 2000-830515 20000720
PRAI EP 2000-830515 20000720
IC ICM **G01N001-31**
AB EP 1174702 A UPAB: 20020403
NOVELTY - A staining equipment includes a washing and staining group comprising sealing trays, and holding tray. The sealing tray is capable of cooperating with an upper face of the slide holding tray to define reagent application areas that can be accessed by a needle according to a predetermined sequence, and to make each of the area liquid-tight with respect to adjacent areas.

DETAILED DESCRIPTION - A staining equipment comprises holders for specimens and reagents; head for taking the specimens and the reagents from respective holder, dispensing the specimens to predetermined positions on microscope slides (31) placed in a holding tray (21), and dispensing the reagents to the specimens; a pump and tubing for supplying and removing washing liquids; and a control unit for controlling the sequence taking, deposition, washing, and reagent application. The slide holding tray is included in a washing and staining group comprising sealing trays. The sealing tray (22) is capable of cooperating with an upper face of the slide holding tray to define reagent application areas that can be accessed by a needle according to a predetermined sequence, and to make each of the area liquid-tight with respect to adjacent areas.

USE - For performing microscopic slide staining required by immunofluorescence techniques, and test like ELISA (Enzyme-Linked Immunosorbent Assay) (claimed).

ADVANTAGE - The invention provides tightly sealed areas after each washing and immersion cycle before applying the fresh liquid. It is also applicable in case of slides with specimen-bearing wells or slides of which the seats are not defined by walls projecting from the slide holding tray, and that requires neither drying the slide surface before applying the staining agent, nor the use of liquid with particular surface tension properties.

DESCRIPTION OF DRAWING(S) - The figure is an exploded view of washing and staining groups of the equipment.

Collecting tray 20
Holding tray 21
Sealing tray 22
Slides 31
Hook 27
Pins 28
Seats 30
Wells 32
Through holes 33
Plate 40
(41) Sealing member s
Dwg.2/12

FS CPI EPI
FA AB; GI
MC CPI: B11-C01C; B11-C08E; B12-K04; J04-B01B
EPI: S03-E13D
TECH UPTX: 20020403
TECHNOLOGY FOCUS - MECHANICAL ENGINEERING - Preferred Component: The sealing tray defines reagent application areas corresponding each with a microscope slide(s) or with individual wells (32) of the same microscope slide. It comprises a plate (40) having openings for reagent application mechanism, and sealing member(s) (41) connected to a bottom face of the plate and provided with openings that are each in register with an opening of the plate. It associated with projecting pins (28) for keeping the slides in place within respective seats (30) in the slide holding tray. Each plate opening corresponds with one of the reagent application areas. Each opening in the sealing member is equipped with a sealing gasket on its whole periphery. The slides are arranged in seats formed by hollows of the holding tray. The seats are depressed to effectively keep the reaction

liquid. The specimen and washing reagent application group comprises hook (27), and collecting tray (20) for the residual liquids. The holding tray has through holes (33) for the passage of washing liquids. The hook is for moving the plate by a downward vertical translation movement to obtain the tight seal with the surface of the holding tray. It is also for lifting the plate away from the surface when the application ends. The collecting tray is equipped with liquid level detector to automatically stop supply when the liquids have reached a predetermined level, or when the liquids have covered the slide holding tray.

L48 ANSWER 7 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-012498 [02] WPIX
DNN N2002-010317 DNC C2002-003270
TI Automatic system processing e.g. histological and cytological preparations, comprises slides with code identifying them and determining their handling and treatment.
DC B04 D16 P31 S03
IN GROPP, R; KAEPPLEIN, A; SCHECK, P; KAPPLEIN, A
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH CO LTD; (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 29
PI EP 1130377 A1 20010905 (200202)* DE 15p G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CN 1311440 A 20010905 (200202) G01N035-00
DE 10010140 A1 20010913 (200202) G01N035-00
JP 2001272410 A 20011005 (200202) 8p G01N035-10
US 2002018733 A1 20020214 (200214) G01N035-00
ADT EP 1130377 A1 EP 2001-100303 20010104; CN 1311440 A CN 2001-104988 20010226; DE 10010140 A1 DE 2000-10010140 20000303; JP 2001272410 A JP 2001-57734 20010302; US 2002018733 A1 US 2001-793199 20010226
PRAI DE 2000-10010140 20000303
IC ICM **G01N001-31**; G01N035-00; G01N035-10
ICS G01N033-48; G01N035-04
ICA A61B010-00; C12M001-16
AB EP 1130377 A UPAB: 20020109
NOVELTY - Automatic system processing e.g. histological and cytological preparations, comprises a slide (2) that carries a code providing information concerning the object(s) (1) and/or their handling or treatment. The information can be read out or retrieved. Several processing stations (3) are arranged in succession, in terms of their function and/or spatial arrangement.

DETAILED DESCRIPTION - Preferred features: Coding is implemented and sensed mechanically, or using a light beam. Optionally it comprises a **barcode**, optically detected. It is alternatively entered into in an electrical, electromagnetic or optical storage medium. The slide has transmitter and receiver units forming a transponder (4). Processing station(s) each have an excitation coil (5) to activate the transponder. Several, optionally all, processing stations have such a coil which can be moved close to them, for transponder activation. The transponder is a read-only, or a combined read-write unit. It is permanently connected to the slide, or else is detachably clipped to it. The transponder communicates with a receiver (7), which includes a read-write unit. Each receiver is connected to a process computer (8) and/or analysis electronics (9). Alternatively the receiver is connected to a single process computer and/or a single electronic analysis unit. The receiver is allocated to the processing station, or each processing station has one. The slide identification code serves to identify the object (1) and/or is for position reporting or determination and/or it allocates a handling or processing program. The object is a histological- or cytological preparation. The slide carrier is a basket and the processing stations are part of automatic specimen staining equipment for the preparations.

USE - To identify and process objects, especially microscope slides.

To carry out staining operations on slides carrying histological or cytological preparations.

ADVANTAGE - Fully-automatic equipment carries out differing, programmed operations on individual objects, automatically, in accordance with codings carried by them. Read-out is by non-contact (e.g. RF) means. The possibility of erroneous treatment is minimized. Various arrangements based on these principles are described.

DESCRIPTION OF DRAWING(S) - An illustrative, schematic block diagram containing non-English text is presented.

object 1
slide 2
processing stations 3
transponder 4
excitation coil 5
receiver 7
process computer 8
analysis electronics 9

Dwg.1/6

FS CPI EPI GMPI
FA AB; GI
MC CPI: B11-C08; B11-C08E; B12-K04E; D05-H09; D05-H10
EPI: S03-E13D

L48 ANSWER 8 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-557902 [62] WPIX
CR 2001-530185 [58]
DNN N2001-414566 DNC C2001-165991
TI Apparatus for processing a specimen from fluid samples comprises an identifier, a marker, a reader, and a specimen transferrer, all of which are in communication with the processor.
DC B04 D16 S03
IN CAPRICCIO, L A; GEISELMAN, T S; JENNINGS, R E; LEVKOFF, B; O'CONNELL, E; OSTGAARD, R A; TENNEY, D A; VARTANIAN, H
PA (CYTY-N) CYTYC CORP
CYC 96
PI WO 2001067067 A2 20010913 (200162)* EN 32p G01N001-31 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001043505 A 20010917 (200204) G01N001-31 <--
EP 1261851 A2 20021204 (200280) EN G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 6572824 B1 20030603 (200339) G01N035-00
ADT WO 2001067067 A2 WO 2001-US7418 20010308; AU 2001043505 A AU 2001-43505 20010308; EP 1261851 A2 EP 2001-916485 20010308, WO 2001-US7418 20010308; US 6572824 B1 CIP of US 1998-156952 19980918, US 2000-520421 20000308
FDT AU 2001043505 A Based on WO 200167067; EP 1261851 A2 Based on WO 200167067
PRAI US 2000-521531 20000308; US 2000-520421 20000308; US 1998-156952 19980918
IC ICM **G01N001-31**; G01N035-00
ICS C12M003-08; G01N001-28
AB WO 200167067 A UPAB: 20030619
NOVELTY - Apparatus for processing a specimen from a fluid sample comprising an identifier (I), a marker (II), a reader (III) and a specimen transferrer (IV) all of which are in communication with the processor (V), is new.

DETAILED DESCRIPTION - Apparatus for processing a specimen from a fluid sample comprises:

(i) an identifier (I) in communication with the processor to

determine indicia corresponding to the sample;
(ii) a marker (II) which labels an analytical element with indicia corresponding to the sample indicia;
(iii) a reader (III) for verifying whether the element indicia corresponds to the sample indicia; and
(iv) a specimen transferrer for transferring a specimen from the sample to the element if the indicia corresponds to the sample indicia, where (I) - (V) are in communication with the processor.
An INDEPENDENT CLAIM is also included for a method of processing a specimen from a fluid sample comprising:
(i) identifying indicia corresponding to the sample;
(ii) marking an analytical element with indicia corresponding to the sample indicia;
(iii) reading the element indicia;
(iv) verifying the element and sample indicia correspond with each other; and
(v) transferring the specimen from the sample to the element.
USE - The apparatus enables the automatic processing of a quantity of cytological specimens from a number of fluid samples (claimed).
ADVANTAGE - The apparatus further reduces manual intervention which increases the system throughput and operating efficiency. Once the apparatus has been loaded the system can operate unattended. This system maintains a one-to-one correlation between the patients and the samples.
Dwg.0/9

FS CPI EPI
FA AB; DCN
MC CPI: B04-F01; B11-C; B11-C08C; B12-K04A; D05-H02; D05-H08; D05-H09
EPI: S03-E13D
TECH UPTX: 20011026
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Apparatus: The sample comprises particles in a liquid suspension, and (IV) collects a spatial distribution, preferably a monolayer, of the particles from the liquid suspension and disposes the collected particles on a stratum of the element, comprising a slide. (IV) further comprises a membrane for collecting the monolayer, and means for breaching the membrane after the collected particles are disposed on the slide.
(II) comprises an ink printer, where ink is transferred to the element at a first location, and then to the element at a second location offset spatially from the first location. The sample indicia comprises a **barcode**, and (I) comprises a **bar code** scanner.
The element indicia comprises an alphanumeric character, and (III) comprises an optical character recognition system.

L48 ANSWER 9 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-515715** [57] WPIX
DNN **N2001-381980** DNC **C2001-154323**
TI Stainer for e.g. immunohistological specimens mounted on slides has several baths of stain and slide holder, each bath is divided into compartments.
DC B04 D16 S03
PA (DEKR-N) DEUT KREBSFORSCHUNGSZENTRUM
CYC 1
PI DE 20005999 U1 20010809 (200157)* 11p G01N001-31 <--
ADT DE 20005999 U1 DE 2000-20005999U 20000404
PRAI DE 2000-20005999 20000404
IC ICM **G01N001-31**
ICS G01N001-28
AB DE 20005999 U UPAB: 20011005
NOVELTY - Stainer for specimens mounted on slides (16) has several baths (2) of stain and a slide holder (3). Each bath is divided into compartments (4 - 8).
USE - In bacteriology, histology, immunohistology and cytology.
ADVANTAGE - A number of different staining processes can be carried

out using the stainer.
DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section of the stainer.
Bath of stain 2
Slide holder 3
Compartments 4 - 8
Groove in slide holder 15
Slide 16
Dwg.1/2

FS CPI EPI
FA AB; GI
MC CPI: B04-B04C; B04-C01; B04-G01; B04-N04; B11-B; B11-C01; B11-C07A; B11-C09; B12-K04A; B12-K04E; D05-A01A4; D05-A01B; D05-H07; D05-H09; D05-H10; D05-J
EPI: S03-E13D

L48 ANSWER 10 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-497620** [55] WPIX
DNC **C2001-149585**
TI Dye automatic delivery device used for dyeing histological objects has a heating station arranged before a reagent container row for heating an object support and for melting a bedding medium.
DC D16 J04 P42
IN DALKIDIS, C; THIEM, S
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH; (DALK-I) DALKIDIS C; (THIE-I) THIEM S
CYC 5

PI	DE 10006084	A1	20010816 (200155)*	7p	B01L009-00	
	GB 2359130	A	20010815 (200155)		G01N001-36	
	US 2001019703	A1	20010906 (200159)		B05C011-00	
	JP 2001242175	A	20010907 (200166)	6p	G01N035-00	<--
	CN 1317370	A	20011017 (200213)		B01L011-00	
	GB 2359130	B	20020327 (200223)		G01N001-36	

ADT DE 10006084 A1 DE 2000-10006084 20000211; GB 2359130 A GB 2001-2732 20010202; US 2001019703 A1 US 2001-780807 20010209; JP 2001242175 A JP 2001-35660 20010213; CN 1317370 A CN 2001-111950 20010211; GB 2359130 B GB 2001-2732 20010202
PRAI DE 2000-10006084 20000211
IC ICM B01L009-00; B01L011-00; B05C011-00; G01N001-36; **G01N035-00**
ICS B01L007-00; C12M001-00; G01N001-28; **G01N001-30**; **G01N001-31**; G01N001-34
AB DE 10006084 A UPAB: 20010927
NOVELTY - Dye automatic delivery device has a heating station (8) arranged before a reagent container row for heating an object support and for melting a bedding medium. The heating station has at least one melt container (9) for simultaneously receiving several transport cages.
DETAILED DESCRIPTION - Preferred Features: The heating station has a housing (10) which is equipped with a ventilator and an electrical heating packet. An air distributor (13) is provided in the housing to deviate heated air via openings (14) in the wall and/or in the base of the melt container onto the object support. The temperature within the heating station can be regulated by a regulator (15).
USE - Used for dyeing histological objects.
ADVANTAGE - No additional manual working steps for removing the bedding medium before dyeing the object are required.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of the dye automatic delivery device.
heating station 8
melt container 9
housing 10
air distributor 13
regulator 15
Dwg.2/3

FS CPI GMPI
FA AB; GI
MC CPI: D05-H08; J04-X

L48 ANSWER 11 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-390062** [41] WPIX
CR 2002-547861 [58]
DNN **N2001-286963** DNC **C2001-118888**
TI Apparatus used for assembly of tissue arrays comprises multicomponent parts e.g. array fabricator, sectioner, processing station.
DC B04 D16 S03
IN KAKAREKA, J W; KALLIONIEMI, O; KONONEN, J; LEIGHTON, S B; POHIDA, T J; SALEM, G H; SAUTER, G
PA (USSH) US DEPT HEALTH & HUMAN SERVICES; (USSH) US NAT INST OF HEALTH
CYC 95
PI WO 2001042796 A1 20010614 (200141)* EN 136p G01N035-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001024329 A 20010618 (200161) G01N035-00
EP 1238286 A1 20020911 (200267) EN G01N035-00
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL RO SI
ADT WO 2001042796 A1 WO 2000-US34043 20001213; AU 2001024329 A AU 2001-24329 20001213; EP 1238286 A1 EP 2000-988081 20001213, WO 2000-US34043 20001213
FDT AU 2001024329 A Based on WO 200142796; EP 1238286 A1 Based on WO 200142796
PRAI US 1999-171262P 19991215; US 1999-170461P 19991213
IC ICM G01N035-00
ICS **G01N001-31**
AB WO 200142796 A UPAB: 20021018
NOVELTY - An apparatus (I) for assembling tissue arrays comprises:
(i) a donor specimen compartmentalized station (Ia);
(ii) a computer readable specimen identifier (Ib);
(iii) a donor block scanner (Ic);
(iv) a tissue array fabricator (Id);
(v) a sectioner (Ie);
(vi) a processing station (If) sections to different biological markers that associate with substrates in the sections; and
(vii) a scanner (Ig).
DETAILED DESCRIPTION - (Ic) determines the specimen location in the carrier; (Id) obtains elongated specimen samples and places them in a recipient block; (Ie) sections the recipient block; (If) exposes sections to different biological markers; and (Ig) detects the presence of the biomarkers.
INDEPENDENT CLAIMS are also included for the following:
(1) an automated apparatus (II) for preparing tissue specimens comprising:
(a) a specimen source (IIa);
(b) a retriever (IIb);
(c) a constructor (IIc) that removes samples from specimens and arrays them in three dimensional (3D) arrays in substrates, where some of the places correspond to samples from different specimens; and
(d) a controller (IId) directing the retriever and constructor;
(2) an apparatus (III) for constructing tissue arrays from specimens comprising:
(a) a donor source (IIIa);
(b) (IIb);
(c) (IIc); and
(d) (IId) which identifies samples within the array;
(3) an automated device (IV) for performing analysis of biological

specimens comprising:
(a) means (IVa) for storing specimens embedded in medium;
(b) (I);
(c) means (IVb) for reacting the corresponding sections of the recipient substrates with reagents;
(d) means for detecting a presence and/or quantity of reagent in the sections; and
(e) computer for recording subject information and correlating it with presence and/or quantity of reagent;
(4) performing (M1) analysis of specimens comprising:
(a) providing sections comprising samples;
(b) exposing the sections to reagents;
(c) obtaining images of the sections; and
(d) analyzing the images to determine if a reaction has occurred;
(5) performing (M2) analysis of specimens comprising:
(a) obtaining samples from one or more sample using (I); and
(b) performing one or more cell free analysis to observe marker(s);
(6) constructing (M3) tissue microarrays from donor specimens comprising:
(a) providing an array of blocks, each including a specimen embedded in medium and identifiable in an array;
(b) retrieving identified blocks from the array;
(c) obtaining samples from the blocks and inserting samples from the specimen into blocks; and
(d) sectioning the blocks;
(7) a computer implemented system (V) for rapid construction and analysis of tissue microarray sections comprising:
(a) a retriever obtaining recipient blocks from a block array and transferring them to a sectioner;
(b) the sectioner cutting sections from blocks for mounting on a solid support;
(c) a conveyer;
(d) a processor;
(e) an image analyzer imaging microarray sections; and
(f) a database storing tissue identifying information and information obtained from analysis of sections;
(8) examining (M4) a sample comprising:
(a) providing samples in an array;
(b) analyzing the samples; and
(c) examining to detect a marker;
(9) examining (M5) samples comprising:
(a) placing elongated samples at identifiable positions in a substrate;
(b) sectioning the substrate to provide copies of an array of the samples;
(c) disseminating one or more copy to others; and
(d) comparing an interpretation of one or more copy to an interpretation of one or more reference copy;
(10) making (M6) a library of tissue specimens comprising:
(a) placing elongated samples in a substrate; and
(b) sectioning the substrate to provide copies of an array of the samples;
(11) reviewing (M7) specimens comprising:
(a) providing sections comprising samples;
(b) obtaining images of sections after exposing the sections to reagents; and
(c) disseminating the images to recipients;
(12) standardizing (M8) pathological evaluations comprising:
(a) visualizing a specimen in a cross-section of a microarray of specimens, where the array comprises specimens in a 2D microarray;
(b) evaluating a biological characteristic of the specimen; and
(c) comparing the evaluation to a standard;
(13) training (M9) a person in histological analysis comprising

providing a section of a microarray as in M8 (a) and tissue-specific information for a specimen in the array, and comparing the evaluation of the person with information for the specimen;

(14) parallel tissue evaluation (M10) comprising:

(a) displaying a computer generated image of a specimen in a microarray;

(b) producing an image evaluation for a clinical parameter; and

(c) comparing the evaluation to a reference; and

(15) parallel evaluation (M11) of a cross-section of a cellular specimen comprising:

(a) visualizing a cross-section of the specimen in a microarray as in M8 (a), where an immunological analysis, histological stain or nucleic acid hybridization has been performed on each specimen;

(b) analyzing a cross-section by examining the results of (a) to evaluate a clinical parameter; and

(c) comparing the evaluation to a standard evaluation of each of the specimens; or

(d) (a), where the specimens have been produced in one place;

(e) analyzing the first cross-section by examining the results of (d) in the first specimen to evaluate a clinical parameter for one specimen; and

(f) visualizing a second cross-section of a second specimen in a microarray as in (d), where the specimen has been produced in another place;

(g) analyzing the second cross-section of the specimen by examining the results of (f) to evaluate a clinical parameter for the second specimen; and

(h) comparing the evaluations to compare the biological analyses.

USE - (I) is used to assemble tissue microarrays (claimed). (III) and M2 are used to detect a mutation in the sample (claimed). M4 is used to perform quality control and to compare reagent performance (claimed). M7 is used to evaluate a reagent for disease diagnosis or treatment, identifying cancer prognostic markers, assessing or choosing a therapy, or finding a biochemical therapy target, preferably in tumors (all claimed).

ADVANTAGE - The apparatus works at high speed and is automated.

DESCRIPTION OF DRAWING(S) - The drawing shows a system for automated, high-speed fabrication of tissue microarrays, showing a storage station for tissue blocks.

specimen source 102
retriever 104
detector 105
constructor 106
sectioner 108
reagent station 110
scanner 112
controller 114
digital camera 160

Dwg.1/29

FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-E01; B04-E05; B04-G01; B11-C07A4; B11-C07A7; B11-C08C; B11-C08D1; B11-C08D2; B11-C08E3; B11-C08E4; B11-C08E5; B12-K04A1; B12-K04F; D05-A02B; D05-H09; D05-H10; D05-H11; D05-H12; D05-H12D1; D05-H18A; D05-H18B
EPI: S03-E13D; S03-E15
TECH UPTX: 20010724

TECHNOLOGY FOCUS - COMPUTING AND CONTROL - Preferred Apparatus: (III) and (V) comprise a database with quantity and subcellular distribution of biological marker(s), specimen location, and sample and block identity and location. (I) comprises robotic transporter(s) and a database of subject information. The biomarker analysis information in (V) is correlated with sample information. (V) comprises stations, a conveyer, robotic arms and a controller.

Preferred Method: M6 comprises an electronic copy of the array. M1 and M7 comprise obtaining and storing digital images.

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Apparatus: The arrays in M4 and M5 are distributed electronically, in M4 via a communication channel, preferably a global system or computer readable medium, preferably a CD-ROM, CD-R, CD-RW, DVD or optical disc. The recipients in M7 indicate and communicate an image interpretation.
Preferred Method: Visualization in M8 is a computer generated image. M10 comprises repeating steps (a) - (c) for another specimen and repeating the steps until all specimens are evaluated. The evaluation is transmitted to a remote place and feedback received on it.

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Apparatus: The tissue sample in (III) is obtained and used in cell-free analysis. The analysis in M1 and (III) is of a biomolecule, preferably (partial) genomic DNA, mRNA, cDNA or a polypeptide.
Preferred Method: Cell-free analysis is DNA or protein sequencing, RFLP determination, Southern, Northern or Western blotting or other DNA or RNA hybridization, single-strand conformational polymorphism determination, mobility shift DNA binding assays, protein gel electrophoresis, protein purification, chromatography, immunoprecipitation, ELISA or other immuno-detection, isolation of antigenic biomolecules, PCR, RT-PCR, differential display, SAGE and PTT. M1 comprises exposing section(s) to 20, preferably 100, or more reagents and obtaining subject information to associate with results, and quantifying the marker-sample reaction. M1 and M4 comprise retrieving elongated specimens from a block array, fixing them in parallel in a substrate which is sectioned. The molecular analysis is of tissue, cellular or subcellular marker distribution. 20, preferably 100, or more specimens were from different subjects. M4 comprises analyzing array copies in the same way, using a specific binding agent, preferably an antibody or nucleic acid probe. One of the array copies is reference analyzed by observer(s) who compare results with a reference. The observers are researchers, trainees, preferably test takers who propose an interpretation, or an automated analysis system. The reagent is an immunohistochemical or nucleic acid marker. The array is a microarray containing 100, preferably 1000 or more samples at coordinates, and a uniform matrix. The samples are from pathology specimens, preferably non-neoplastic and/or neoplastic tissue, or comparative specimens of tumor development stages or type, progression of dynamic tissue, preferably uterine endocrine tissue, samples from the same tissue, or specimens of a tumor and its metastases. The samples in M5 comprise a multiple tissue library. In M7 100 or more tissue specimens in each section are exposed to 100 or more reagents and the reaction is quantified. The biological sample is from a tumor.
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preparation: No details are given on preparation of (I).
Preferred Apparatus: (II) further comprises a sectioner to section the arrays for carrying the samples, controlled by (IId). (IId) and (III) comprise a recorder. (II) comprises a scanner, biomarker station, and image analyzer. (II) comprises specimens at assigned locations and embedded in medium stored by carriers in (IIa). The carriers are identifiable by the controller and (IIa) comprises recipient stations for the carriers. (II) comprises a locator and provides a reference indicium with an elongated marker and comprising parallel elongated reference indicia. (IIa) has parallel top and bottom surfaces with the indicium perpendicular to them. A region of interest is located by measuring a distance from the reference indicium. (IId) in (III) recognizes identifiers via (IIb). The specimens are embedded in medium blocks; (III) also comprises a locator for marking the blocks. (IIIa) comprises a storage station, a positioning device, and a robotic arm. (IIIb) comprises a holder and a reciprocal punch comprising a positioning device. (III) comprises a microscope, a recipient block source, a sectioner, a

processing station, an imager with a processor, and a detector with a quantifier and a locator, and a storage device. The donor and the recipient sources are a single station. The retriever returns the specimens to the source after array construction. (I) comprises a controller, a computer readable identifier, embedded, elongated specimens, and a processing station.
Preferred Method: M3 comprises determining and storing specimen and region of interest coordinates and marking the donor block with an indicator. M3 and M7 comprise punching receptacles and samples for placing in the recipient block, retrieving, positioning via a retriever, sectioning a recipient block, and mounting the sections. The samples are obtained from region(s) of interest determined by examining a thin section of the donor block. Recipient blocks are stored in an array. Specimen identity and recipient block location is stored. Recipient blocks are marked with tissue identity and block location information. Microarray sections are treated with reagent(s) and analyzed for markers. Array copies are included with a test kit in M5, and combined to provide a reference interpretation. M6 comprises associating an electronic identifier with each array position. M7 comprises exposing sections to reagents and the recipients analyze the images, correlating subject information with image interpretation. M7 comprises storing tissue and recipient block information.

L48 ANSWER 12 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-090846** [10] WPIX
DNN **N2001-068859**
TI Method for automatically producing tissue slides from tissue sample within sample block using laser position sensor.
DC S02 S03 S05
IN GIBSON, J F; PASTERNACK, G R; VONEIFF, J
PA (CULT-N) CULTERRA LLC; (GIBS-I) GIBSON J F; (VONE-I) VONEIFF J
CYC 91
PI WO 2000062035 A1 20001019 (200110)* EN 49p G01N001-06
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000042126 A 20001114 (200110) G01N001-06
EP 1171760 A1 20020116 (200207) EN G01N001-06
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 6387653 B1 20020514 (200239) G01N001-30 <--
US 2003022271 A1 20030130 (200311) G01N033-48
ADT WO 2000062035 A1 WO 2000-US9302 20000407; AU 2000042126 A AU 2000-42126 20000407; EP 1171760 A1 EP 2000-921863 20000407, WO 2000-US9302 20000407; US 6387653 B1 US 1999-289181 19990409; US 2003022271 A1 Div ex US 1999-289181 19990409, US 2002-91173 20020306
FDT AU 2000042126 A Based on WO 200062035; EP 1171760 A1 Based on WO 200062035; US 2003022271 A1 Div ex US 6387653
PRAI US 1999-289181 19990409; US 2002-91173 20020306
IC ICM G01N001-06; **G01N001-30**; G01N033-48
ICS C12M001-38; **G01N001-31**
AB WO 200062035 A UPAB: 20010220
NOVELTY - The orientation and depth of a sample embedded in a support is determined with a laser optical sensor. The sample is oriented to maximize the area presented to a microtome so a slice can be removed from the sample. The slice is then placed on a slide.
. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for an apparatus for automatically producing tissue slides from a tissue sample within a sample block.
USE - For automatically producing tissue slides for histology.

ADVANTAGE - Automatically performs the functions of the microtome and technician.

DESCRIPTION OF DRAWING(S) - The drawing shows a flowchart of the method for automatically producing tissue slides.

Dwg.1c/5

FS EPI

FA AB; GI

MC EPI: S02-A03B4; S03-E13A; S03-E13D; S03-E14H; S03-E15; S05-C03

L48 ANSWER 13 OF 13 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN 1991-281595 [38] WPIX

CR 1997-107522 [10]; 1997-384677 [35]; 1997-401855 [37]; 1997-401856 [37]; 2001-374266 [39]; 2002-194906 [25]; 2002-412948 [44]; 2002-626276 [67]; 2003-312262 [30]

DNN N1991-215217 DNC C1991-122071

TI Automated biological reaction appts. - includes slide support and reagent supply carousel which provides rapid, reliable and reproducible results.

DC B04 D16 J04 S03

IN COPELAND, K G; GROGAN, T M; HASSEN, C; HUMPHREYS, W R; LEMME, C E; MILLER, P C; RICHARDS, W L; SHOWALTER, W A; HUMPHREYS, W

PA (VENT-N) VENTANA MEDICAL SYSTEMS INC; (VENT-N) VENTANA MEDICAL SYSTEMS; (IMMU-N) IMMUNODIAGNOSTICS INC; (IMMU-N) IMMUNODIAGNOSTICS

CYC 17

PI WO 9113335 A 19910905 (199138)*
RW: BE CH DE DK ES FR GB GR IT LI LU NL SE
W: CA JP US
EP 517835 A1 19921216 (199251) EN 114p G01N001-00
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 05504627 W 19930715 (199333) 34p G01N035-04 <--
EP 517835 B1 19960207 (199610) EN 64p G01N001-30 <--
R: BE CH DE DK ES FR GB IT LI NL
DE 69117052 E 19960321 (199617) G01N001-30 <--
CA 2077452 C 20001024 (200059) EN B01L007-02

ADT EP 517835 A1 EP 1991-906210 19910228, WO 1991-US1149 19910228; JP 05504627 W JP 1991-505990 19910228, WO 1991-US1149 19910228; EP 517835 B1 EP 1991-906210 19910228, WO 1991-US1149 19910228; DE 69117052 E DE 1991-617052 19910228, EP 1991-906210 19910228, WO 1991-US1149 19910228; CA 2077452 C CA 1991-2077452 19910228, WO 1991-US1149 19910228

FDT EP 517835 A1 Based on WO 9113335; JP 05504627 W Based on WO 9113335; EP 517835 B1 Based on WO 9113335; DE 69117052 E Based on EP 517835, Based on WO 9113335; CA 2077452 C Based on WO 9113335

PRAI US 1990-488601 19900302

REP US 4298571; US 4406547; US 4447395; US 4708886; US 4774055; US 4781891; US 4815978; US 4919887; US 4965049

IC ICM B01L007-02; G01N001-00; **G01N001-30**; **G01N035-04**
ICS **G01N001-31**; G01N021-75; G01N033-483; G01N033-50; **G01N035-02**; **G01N035-10**

AB WO 9113335 A UPAB: 20030513
The description refers to an automatic reaction appts. including a carousel (24) which moves respective slide supports (26) successively through a reagent delivery station in which a reagent delivery device (18) feeds a selected one of a number of reagents (12) on a reagent carousel (10) onto a slide supported at the delivery station. The slide support carousel then moves the slides sequentially through an evapn. inhibiting liq. supply station, a vortex agitation station, a heating station, a rinsing station, and a draining station. The appts. includes a reader for reading **bar codes** on slides on the slide support carousel, and means for detecting and selcting the appropriate reagent at the delivery station.

USE/ADVANTAGE - In a wide variety of biological assays such as automatic immunostaining of tissue sections, in-situ DNA analysis, immunoassays such as ELISA, etc. Provides rapid, reliable, and reproducible results in a variety of assays and is cost effective in terms

of equipment, reagent and labour costs. Different reagent treatments can be individually performed for each of the various samples by appropriate programming of the appts.

FS CPI EPI
FA AB; GI
MC CPI: B04-B04A1; B11-C08; B12-K04; D05-H09; D05-H12; J04-B01
EPI: S03-E13D; S03-E14H4
ABEQ JP 05504627 W UPAB: 19931119
Automatic reaction appts. includes a carousel (24) which moves respective slide supports (26) successively through a reagent delivery station in which a reagent delivery device (18) feeds a selected one of a number of reagents (12) on a reagent carousel (10) onto a slide supported at the delivery station. The slide support carousel then moves the slides sequentially through an evapn. inhibiting liq. supply station, a vortex agitation station, a heating station, a rinsing station, and a draining station. The appts. includes a reader for reading **bar codes** on slides on the slide support carousel, and means for detecting and selecting the appropriate reagent at the delivery station.
USE/ADVANTAGE - In a wide variety of biological assays such as automatic immuno-staining of tissue sections, in-situ DNA analysis, immunoassays such as ELISA, etc. Provides rapid, reliable, and reproducible results in a variety of assays and is cost effective in terms of equipment, reagent and labour costs. Different reagent treatments can be individually performed for each of the various samples by appropriate programming of the appts.
ABEQ EP 517835 B UPAB: 19960308
A biological reaction apparatus for dispensing a selected reagent to a sample, said biological reaction apparatus having: a reagent carousel (10) having a plurality of reagent container supports (11) thereon; homing and indexing means (36,346) operatively coupled to the reagent carousel (10), for identifying the position of each reagent container support (11) with reference to a home position; and drive means (14,16) engaging the reagent carousel (10) and operatively coupled to said homing and indexing means (36,346) for rotating the reagent carousel (10) and positioning a preselected reagent container support (11) in a reagent supply zone wherein said reagent supply zone is oriented so that a reagent in a container in said preselected reagent container support is dispensable to a sample characterised in that said reagent container supports (11) are arranged to accommodate a reagent container such that it is positioned directly above a sample wherein in the reagent supply zone whereby reagent is dispensable from a lower end of said container directly onto a sample.
Dwg.15/34

=> d all abeq tech abex tot l55

L55 ANSWER 1 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-478489 [45] WPIX
DNN N2003-380321 DNC C2003-127653
TI Staining for use in manual laboratory, uses sample slides which remain attached to staining device during staining procedure.
DC B04 D16 S03
IN CONTANT, M
PA (CONT-I) CONTANT M
CYC 1
PI NL 1018976 C6 20030319 (200345)* 7p G01N001-31 <--
ADT NL 1018976 C6 NL 2001-1018976 20010918
PRAI NL 2001-1018976 20010918
IC ICM **G01N001-31**
ICS **G01N001-30**
AB NL 1018976 C UPAB: 20030716
NOVELTY - Staining comprising microscope slides (6) for samples (5) which remain physically attached to the device during the staining procedure, is

new.

DETAILED DESCRIPTION - A device and a method for carrying out staining of a material in a manual laboratory as part of a histological, cytological, bacteriological, hermatological or immunological process uses an electronic system for advising the operative as to which reagents the device with the microscope slides with the material to be stained on them should be placed in during a given time period. The slides remain physically attached to the device.

USE - The device is useful for staining of a material in a manual laboratory.

ADVANTAGE - The laboratory operative is made to follow the correct staining protocol.

DESCRIPTION OF DRAWING(S) - Figure 1 shows a perspective view of the staining apparatus.

Display 1
Indicators 2
Switch 3
Coupling mechanism for attaching material to be stained to microscope slide 4
Material to be stained 5
Microscope slide 6
Socket for e.g. recharging battery and/or providing power supply 7
Infra-red transmiter/receiver device 8
Barcode scanner 9
Loudspeaker 10
Dwg.1/3

FS CPI EPI
FA AB; GI
MC CPI: B11-C07A; B11-C08G; D05-H; D05-H09
EPI: S03-E13D
TECH UPTX: 20030716
TECHNOLOGY FOCUS - MECHANICAL ENGINEERING - The coupling mechanism (4) for attaching the slides to the device only makes physical contact with the upper 20 mm of the slides.

L55 ANSWER 2 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-406655** [44] WPIX
DNN **N2002-319270**
TI Laboratory process to present cytological or histological samples with clips or marked legends for dye-marking.
DC S03
IN GROPP, R; KUENKEL, S
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH; (GROP-I) GROPP R; (KUEN-I) KUENKEL S
CYC 5

PI	DE 10052834	A1	20020425 (200244)*	4p	G01N001-28	
	JP 2002181827	A	20020626 (200246)	4p	G01N035-00	<--
	US 2002090731	A1	20020711 (200248)		G01N035-00	<--
	GB 2370635	A	20020703 (200251)		G01N001-30	<--
	CN 1350170	A	20020522 (200258)		G01N001-28	
	GB 2370635	B	20021224 (200309)		G01N001-30	<--

ADT DE 10052834 A1 DE 2000-10052834 20001024; JP 2002181827 A JP 2001-326748 20011024; US 2002090731 A1 US 2001-11510 20011022; GB 2370635 A GB 2001-22810 20010921; CN 1350170 A CN 2001-137136 20011024; GB 2370635 B GB 2001-22810 20010921
PRAI DE 2000-10052834 20001024
IC ICM G01N001-28; **G01N001-30; G01N035-00**
AB DE 10052834 A UPAB: 20020711
NOVELTY - In a laboratory process to treat cytological or histological preparations in e.g. an automated dye assembly, the test items are transported on slides and in magazines to a series of work stations where they are treated in accordance with pre-programmed and selected sequences. On arrival at the treatment stations the slides and or magazines are

especially denoted by visible clips or marked legends allocating each to a specific process.

USE - Process to present cytological or histological samples for process e.g. dye-marking.

ADVANTAGE - The process simplifies the presentation of samples for semi-automated or automated dye-marking process.

DESCRIPTION OF DRAWING(S) - The drawing shows the optical presentation on a work station display. (Drawing includes non English-language text).

Dwg.1/1

FS EPI
FA AB; GI
MC EPI: S03-E13D1; S03-E14H6; S03-E15

L55 ANSWER 3 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-406654** [44] WPIX
DNN **N2002-319269**
TI Laboratory assembly to dye cytological or histological preparations monitors reagents over extended period.
DC S03
IN ECKERT, R; GROPP, R
PA (LEIC-N) LEICA MICROSYSTEMS GMBH; (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 5
PI DE 10052833 A1 20020425 (200244)* 4p G01N001-28
GB 2368397 A 20020501 (200244) G01N001-31 <--
JP 2002181676 A 20020626 (200246) 5p G01N001-30 <--
US 2002090730 A1 20020711 (200248) G01N035-00 <--
CN 1350171 A 20020522 (200258) G01N001-28
GB 2368397 B 20021211 (200282) G01N001-31 <--
ADT DE 10052833 A1 DE 2000-10052833 20001024; GB 2368397 A GB 2001-23898 20011004; JP 2002181676 A JP 2001-325948 20011024; US 2002090730 A1 US 2001-4138 20011023; CN 1350171 A CN 2001-137137 20011024; GB 2368397 B GB 2001-23898 20011004
PRAI DE 2000-10052833 20001024
IC ICM G01N001-28; **G01N001-30; G01N001-31; G01N035-00**
AB DE 10052833 A UPAB: 20020711
NOVELTY - In a laboratory process to treat cytological or histological preparations in e.g. an automated dye assembly, the test items are transported on slides and in magazines to a series of work stations where they are treated in accordance with pre-programmed and selected sequences. The process incorporates especially an automated system to monitor the presence and condition of usable reagents within pre-determined parameters.

USE - Laboratory assembly to dye cytological or histological preparations.

ADVANTAGE - The assembly produces consistent results over an extended period.

DESCRIPTION OF DRAWING(S) - The drawing shows a work station screen presentation in which the presence of reagents is indicated by color bars (Drawing includes non English-language text).

Dwg.1/1

FS EPI
FA AB; GI
MC EPI: S03-E13D1; S03-E14H6; S03-E15

L55 ANSWER 4 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-383818** [42] WPIX
DNC **C2002-108196**
TI Immuno histochemistry laboratory staining tray consists of a casing with sheets separating the individual reagents, and a transparent viewing lid.
DC B04 D16 P81 S03

IN BARRIONUEVO DE MEDEIROS, C R
PA (MEDE-I) BARRIONUEVO DE MEDEIROS C R
CYC 1
PI BR 2000003790 A 20020102 (200242)* 1p G01N001-31 <--
ADT BR 2000003790 A BR 2000-3790 20000517
PRAI BR 2000-3790 20000517
IC ICM **G01N001-31**
ICS G02B021-34
AB BR 200003790 A UPAB: 20020704
NOVELTY - The immuno histochemistry laboratory staining tray comprises a casing (1) with a reagent tank (2), and reagents (4) with separation sheets (3) between them. The tray has a transparent lid (not shown).
USE - In instrumentation.
Dwg.1/1
FS CPI EPI GMPI
FA AB; GI
MC CPI: B11-C08E; D05-H09
EPI: S03-E13D

L55 ANSWER 5 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-282125** [33] WPIX
DNN **N2002-220288**
TI Handling apparatus for cytological or histological preparations has feed stations and/or removal stations allocated to several processing stations.
DC P81 S03
IN DORENKAMP, C; KAEPPLEIN, A; KUENKEL, S; THIEM, S; KAPPLEIN, A
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 5
PI DE 10041230 A1 20020307 (200233)* 5p G01N001-28
US 2002051735 A1 20020502 (200234) G01N035-00 <--
GB 2368395 A 20020501 (200237) G01N001-31 <--
JP 2002122605 A 20020426 (200244) 6p G01N035-02 <--
CN 1339697 A 20020313 (200245) G01N001-31 <--
GB 2368395 B 20021030 (200279) G01N001-31 <--
ADT DE 10041230 A1 DE 2000-10041230 20000822; US 2002051735 A1 US 2001-932900 20010820; GB 2368395 A GB 2001-18349 20010727; JP 2002122605 A JP 2001-250943 20010822; CN 1339697 A CN 2001-125774 20010822; GB 2368395 B GB 2001-18349 20010727
PRAI DE 2000-10041230 20000822
IC ICM G01N001-28; **G01N001-31**; **G01N035-00**; **G01N035-02**
ICS **G01N001-30**; **G01N035-04**; G02B021-24
AB DE 10041230 A UPAB: 20020524
NOVELTY - The apparatus includes several processing stations (2) and a conveying device (4). A feed station (6) and/or a removal station (7) can be allocated to a predetermined number of processing stations, in a fixed or variable arrangement. The feed station and/or removal station may be allocated to up to four processing stations.
USE - For supplying objects into e.g. dying machine.
ADVANTAGE - Allows the handling to be speeded up, without regard to the feed or removal.
DESCRIPTION OF DRAWING(S) - The drawing shows feed and removal stations in the form of drawers.
Conveying device 4
Feed station 6
Removal station 7
Dwg.1/1
FS EPI GMPI
FA AB; GI
MC EPI: S03-E13D

L55 ANSWER 6 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-282124** [33] WPIX

DNN **N2002-220287**
TI Handling apparatus for cytological or histological preparations has region which receives modular processing stations.
DC P81 S03
IN DALKIDIS, C; SCHECK, P; THIEM, S
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 5
PI DE 10041229 A1 20020307 (200233)* 11p G01N001-28
GB 2366374 A 20020306 (200233) G01N001-31 <--
US 2002054829 A1 20020509 (200235) G01N035-04
JP 2002122606 A 20020426 (200244) 9p G01N035-02
CN 1339695 A 20020313 (200245) G01N001-31 <--
GB 2366374 B 20021030 (200279) G01N001-31 <--
ADT DE 10041229 A1 DE 2000-10041229 20000822; GB 2366374 A GB 2001-18881 20010802; US 2002054829 A1 US 2001-933415 20010820; JP 2002122606 A JP 2001-250948 20010822; CN 1339695 A CN 2001-125772 20010822; GB 2366374 B GB 2001-18881 20010802
PRAI DE 2000-10041229 20000822
IC ICM G01N001-28; **G01N001-31**; G01N035-02; G01N035-04
ICS G01N033-48; G02B021-24
ICA **G01N001-30**
AB DE 10041229 A UPAB: 20020524
NOVELTY - The apparatus includes several processing stations (3) arranged in a housing (2), and a conveying device (5) for supplying or removing objects or object carriers (4) into the processing stations. A region (9) allocated to the processing stations (4) receives modular processing stations (10) with fixed functions.
USE - For supplying objects into e.g. dying machine.
ADVANTAGE - Increased flexibility.
DESCRIPTION OF DRAWING(S) - The drawing shows an opened dying machine.
Processing stations 3
Conveying device 5
Modular processing station 10
Dwg.1/6
FS EPI GMPI
FA AB; GI
MC EPI: S03-E13D

L55 ANSWER 7 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2002-156711** [21] WPIX
DNN **N2002-119268** DNC **C2002-049004**
TI Staining equipment for performing microscopic slide staining, includes washing and staining group comprising sealing trays capable of cooperating with slide holding tray to define reagent application areas.
DC B04 J04 S03
IN GIODICE, A
PA (MEDI-N) MEDIC SRL
CYC 25
PI EP 1174702 A1 20020123 (200221)* EN 18p G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT EP 1174702 A1 EP 2000-830515 20000720
PRAI EP 2000-830515 20000720
IC ICM **G01N001-31**
AB EP 1174702 A UPAB: 20020403
NOVELTY - A staining equipment includes a washing and staining group comprising sealing trays, and holding tray. The sealing tray is capable of cooperating with an upper face of the slide holding tray to define reagent application areas that can be accessed by a needle according to a predetermined sequence, and to make each of the area liquid-tight with respect to adjacent areas.
DETAILED DESCRIPTION - A staining equipment comprises holders for

specimens and reagents; head for taking the specimens and the reagents from respective holder, dispensing the specimens to predetermined positions on microscope slides (31) placed in a holding tray (21), and dispensing the reagents to the specimens; a pump and tubing for supplying and removing washing liquids; and a control unit for controlling the sequence taking, deposition, washing, and reagent application. The slide holding tray is included in a washing and staining group comprising sealing trays. The sealing tray (22) is capable of cooperating with an upper face of the slide holding tray to define reagent application areas that can be accessed by a needle according to a predetermined sequence, and to make each of the area liquid-tight with respect to adjacent areas.

USE - For performing microscopic slide staining required by immunofluorescence techniques, and test like ELISA (Enzyme-Linked Immunosorbent Assay) (claimed).

ADVANTAGE - The invention provides tightly sealed areas after each washing and immersion cycle before applying the fresh liquid. It is also applicable in case of slides with specimen-bearing wells or slides of which the seats are not defined by walls projecting from the slide holding tray, and that requires neither drying the slide surface before applying the staining agent, nor the use of liquid with particular surface tension properties.

DESCRIPTION OF DRAWING(S) - The figure is an exploded view of washing and staining groups of the equipment.

Collecting tray 20
Holding tray 21
Sealing tray 22
Slides 31
Hook 27
Pins 28
Seats 30
Wells 32
Through holes 33
Plate 40
(41) Sealing member s

Dwg.2/12

FS CPI EPI
FA AB; GI
MC CPI: B11-C01C; B11-C08E; B12-K04; J04-B01B
EPI: S03-E13D
TECH UPTX: 20020403

TECHNOLOGY FOCUS - MECHANICAL ENGINEERING - Preferred Component: The sealing tray defines reagent application areas corresponding each with a microscope slide(s) or with individual wells (32) of the same microscope slide. It comprises a plate (40) having openings for reagent application mechanism, and sealing member(s) (41) connected to a bottom face of the plate and provided with openings that are each in register with an opening of the plate. It associated with projecting pins (28) for keeping the slides in place within respective seats (30) in the slide holding tray. Each plate opening corresponds with one of the reagent application areas. Each opening in the sealing member is equipped with a sealing gasket on its whole periphery. The slides are arranged in seats formed by hollows of the holding tray. The seats are depressed to effectively keep the reaction liquid. The specimen and washing reagent application group comprises hook (27), and collecting tray (20) for the residual liquids. The holding tray has through holes (33) for the passage of washing liquids. The hook is for moving the plate by a downward vertical translation movement to obtain the tight seal with the surface of the holding tray. It is also for lifting the plate away from the surface when the application ends. The collecting tray is equipped with liquid level detector to automatically stop supply when the liquids have reached a predetermined level, or when the liquids have covered the slide holding tray.

L55 ANSWER 8 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN 2002-012498 [02] WPIX
DNN N2002-010317 DNC C2002-003270
TI Automatic system processing e.g. histological and cytological preparations, comprises slides with code identifying them and determining their handling and treatment.
DC B04 D16 P31 S03
IN GROPP, R; KAEPPLEIN, A; SCHECK, P; KAPPLEIN, A
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH CO LTD; (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH
CYC 29
PI EP 1130377 A1 20010905 (200202)* DE 15p G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
CN 1311440 A 20010905 (200202) G01N035-00
DE 10010140 A1 20010913 (200202) G01N035-00
JP 2001272410 A 20011005 (200202) 8p G01N035-10
US 2002018733 A1 20020214 (200214) G01N035-00
ADT EP 1130377 A1 EP 2001-100303 20010104; CN 1311440 A CN 2001-104988 20010226; DE 10010140 A1 DE 2000-10010140 20000303; JP 2001272410 A JP 2001-57734 20010302; US 2002018733 A1 US 2001-793199 20010226
PRAI DE 2000-10010140 20000303
IC ICM **G01N001-31**; G01N035-00; G01N035-10
ICS G01N033-48; G01N035-04
ICA A61B010-00; C12M001-16
AB EP 1130377 A UPAB: 20020109
NOVELTY - Automatic system processing e.g. histological and cytological preparations, comprises a slide (2) that carries a code providing information concerning the object(s) (1) and/or their handling or treatment. The information can be read out or retrieved. Several processing stations (3) are arranged in succession, in terms of their function and/or spatial arrangement.

DETAILED DESCRIPTION - Preferred features: Coding is implemented and sensed mechanically, or using a light beam. Optionally it comprises a **barcode**, optically detected. It is alternatively entered into in an electrical, electromagnetic or optical storage medium. The slide has transmitter and receiver units forming a transponder (4). Processing station(s) each have an excitation coil (5) to activate the transponder. Several, optionally all, processing stations have such a coil which can be moved close to them, for transponder activation. The transponder is a read-only, or a combined read-write unit. It is permanently connected to the slide, or else is detachably clipped to it. The transponder communicates with a receiver (7), which includes a read-write unit. Each receiver is connected to a process computer (8) and/or analysis electronics (9). Alternatively the receiver is connected to a single process computer and/or a single electronic analysis unit. The receiver is allocated to the processing station, or each processing station has one. The slide identification code serves to identify the object (1) and/or is for position reporting or determination and/or it allocates a handling or processing program. The object is a histological- or cytological preparation. The slide carrier is a basket and the processing stations are part of automatic specimen staining equipment for the preparations.

USE - To identify and process objects, especially microscope slides. To carry out staining operations on slides carrying histological or cytological preparations.

ADVANTAGE - Fully-automatic equipment carries out differing, programmed operations on individual objects, automatically, in accordance with codings carried by them. Read-out is by non-contact (e.g. RF) means. The possibility of erroneous treatment is minimized. Various arrangements based on these principles are described.

DESCRIPTION OF DRAWING(S) - An illustrative, schematic block diagram containing non-English text is presented.
object 1
slide 2

processing stations 3
transponder 4
excitation coil 5
receiver 7
process computer 8
analysis electronics 9
Dwg.1/6
FS CPI EPI GMPI
FA AB; GI
MC CPI: B11-C08; B11-C08E; B12-K04E; D05-H09; D05-H10
EPI: S03-E13D

L55 ANSWER 9 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-557902 [62] WPIX
CR 2001-530185 [58]
DNN N2001-414566 DNC C2001-165991
TI Apparatus for processing a specimen from fluid samples comprises an identifier, a marker, a reader, and a specimen transferrer, all of which are in communication with the processor.
DC B04 D16 S03
IN CAPRICCIO, L A; GEISELMAN, T S; JENNINGS, R E; LEVKOFF, B; O'CONNELL, E; OSTGAARD, R A; TENNEY, D A; VARTANIAN, H
PA (CYTY-N) CYTYC CORP
CYC 96
PI WO 2001067067 A2 20010913 (200162)* EN 32p G01N001-31 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001043505 A 20010917 (200204) G01N001-31 <--
EP 1261851 A2 20021204 (200280) EN G01N001-31 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 6572824 B1 20030603 (200339) G01N035-00
ADT WO 2001067067 A2 WO 2001-US7418 20010308; AU 2001043505 A AU 2001-43505 20010308; EP 1261851 A2 EP 2001-916485 20010308, WO 2001-US7418 20010308; US 6572824 B1 CIP of US 1998-156952 19980918, US 2000-520421 20000308
FDT AU 2001043505 A Based on WO 200167067; EP 1261851 A2 Based on WO 200167067
PRAI US 2000-521531 20000308; US 2000-520421 20000308; US 1998-156952 19980918
IC ICM **G01N001-31**; G01N035-00
ICS C12M003-08; G01N001-28
AB WO 200167067 A UPAB: 20030619
NOVELTY - Apparatus for processing a specimen from a fluid sample comprising an identifier (I), a marker (II), a reader (III) and a specimen transferrer (IV) all of which are in communication with the processor (V), is new.
DETAILED DESCRIPTION - Apparatus for processing a specimen from a fluid sample comprises:
(i) an identifier (I) in communication with the processor to determine indicia corresponding to the sample;
(ii) a marker (II) which labels an analytical element with indicia corresponding to the sample indicia;
(iii) a reader (III) for verifying whether the element indicia corresponds to the sample indicia; and
(iv) a specimen transferrer for transferring a specimen from the sample to the element if the indicia corresponds to the sample indicia, where (I) - (V) are in communication with the processor.
An INDEPENDENT CLAIM is also included for a method of processing a specimen from a fluid sample comprising:
(i) identifying indicia corresponding to the sample;

(ii) marking an analytical element with indicia corresponding to the sample indicia;
(iii) reading the element indicia;
(iv) verifying the element and sample indicia correspond with each other; and
(v) transferring the specimen from the sample to the element.
USE - The apparatus enables the automatic processing of a quantity of cytological specimens from a number of fluid samples (claimed).
ADVANTAGE - The apparatus further reduces manual intervention which increases the system throughput and operating efficiency. Once the apparatus has been loaded the system can operate unattended. This system maintains a one-to-one correlation between the patients and the samples.
Dwg.0/9
FS CPI EPI
FA AB; DCN
MC CPI: B04-F01; B11-C; B11-C08C; B12-K04A; D05-H02; D05-H08; D05-H09
EPI: S03-E13D
TECH UPTX: 20011026
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Apparatus: The sample comprises particles in a liquid suspension, and (IV) collects a spatial distribution, preferably a monolayer, of the particles from the liquid suspension and disposes the collected particles on a stratum of the element, comprising a slide. (IV) further comprises a membrane for collecting the monolayer, and means for breaching the membrane after the collected particles are disposed on the slide.
(II) comprises an ink printer, where ink is transferred to the element at a first location, and then to the element at a second location offset spatially from the first location. The sample indicia comprises a **barcode**, and (I) comprises a **bar code** scanner.
The element indicia comprises an alphanumeric character, and (III) comprises an optical character recognition system.
ABEX UPTX: 20011026
EXAMPLE - No suitable example is provided.

L55 ANSWER 10 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-515715** [57] WPIX
DNN **N2001-381980** DNC **C2001-154323**
TI Stainer for e.g. immunohistological specimens mounted on slides has several baths of stain and slide holder, each bath is divided into compartments.
DC B04 D16 S03
PA (DEKR-N) DEUT KREBSFORSCHUNGSZENTRUM
CYC 1
PI DE 20005999 U1 20010809 (200157)* 11p G01N001-31 <--
ADT DE 20005999 U1 DE 2000-20005999U 20000404
PRAI DE 2000-20005999 20000404
IC ICM **G01N001-31**
ICS G01N001-28
AB DE 20005999 U UPAB: 20011005
NOVELTY - Stainer for specimens mounted on slides (16) has several baths (2) of stain and a slide holder (3). Each bath is divided into compartments (4 - 8).
USE - In bacteriology, histology, immunohistology and cytology.
ADVANTAGE - A number of different staining processes can be carried out using the stainer.
DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section of the stainer.
Bath of stain 2
Slide holder 3
Compartments 4 - 8
Groove in slide holder 15
Slide 16
Dwg.1/2

FS CPI EPI
FA AB; GI
MC CPI: B04-B04C; B04-C01; B04-G01; B04-N04; B11-B; B11-C01; B11-C07A; B11-C09; B12-K04A; B12-K04E; D05-A01A4; D05-A01B; D05-H07; D05-H09; D05-H10; D05-J
EPI: S03-E13D
ABEX UPTX: 20011005
EXAMPLE - In an EMBODIMENT each compartment accommodates 2 - 10, especially 4 - 8, slides, contains 50 ml of stain and has a rectangular shape. The stainer has at least 4 stain baths, each of which contains 2 - 10, especially 4 - 6, compartments. The slide holder is in the form of a comb, the edges of the slides fitting into grooves (15) in the holder, so that all the slides in the holder can simultaneously be dipped in stain. The position of the holder is controlled by computer.

L55 ANSWER 11 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-497620** [55] WPIX
DNC **C2001-149585**
TI Dye automatic delivery device used for dyeing histological objects has a heating station arranged before a reagent container row for heating an object support and for melting a bedding medium.
DC D16 J04 P42
IN DALKIDIS, C; THIEM, S
PA (LEIC-N) LEICA MICROSYSTEMS NUSSLOCH GMBH; (DALK-I) DALKIDIS C; (THIE-I) THIEM S
CYC 5
PI DE 10006084 A1 20010816 (200155)* 7p B01L009-00
GB 2359130 A 20010815 (200155) G01N001-36
US 2001019703 A1 20010906 (200159) B05C011-00
JP 2001242175 A 20010907 (200166) 6p G01N035-00 <--
CN 1317370 A 20011017 (200213) B01L011-00
GB 2359130 B 20020327 (200223) G01N001-36
ADT DE 10006084 A1 DE 2000-10006084 20000211; GB 2359130 A GB 2001-2732 20010202; US 2001019703 A1 US 2001-780807 20010209; JP 2001242175 A JP 2001-35660 20010213; CN 1317370 A CN 2001-111950 20010211; GB 2359130 B GB 2001-2732 20010202
PRAI DE 2000-10006084 20000211
IC ICM B01L009-00; B01L011-00; B05C011-00; G01N001-36; **G01N035-00**
ICS B01L007-00; C12M001-00; G01N001-28; **G01N001-30**; **G01N001-31**; G01N001-34
AB DE 10006084 A UPAB: 20010927
NOVELTY - Dye automatic delivery device has a heating station (8) arranged before a reagent container row for heating an object support and for melting a bedding medium. The heating station has at least one melt container (9) for simultaneously receiving several transport cages.
DETAILED DESCRIPTION - Preferred Features: The heating station has a housing (10) which is equipped with a ventilator and an electrical heating packet. An air distributor (13) is provided in the housing to deviate heated air via openings (14) in the wall and/or in the base of the melt container onto the object support. The temperature within the heating station can be regulated by a regulator (15).
USE - Used for dyeing histological objects.
ADVANTAGE - No additional manual working steps for removing the bedding medium before dyeing the object are required.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of the dye automatic delivery device.
heating station 8
melt container 9
housing 10
air distributor 13
regulator 15
Dwg.2/3
FS CPI GMPI

FA AB; GI
MC CPI: D05-H08; J04-X

L55 ANSWER 12 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-390062** [41] WPIX
CR 2002-547861 [58]
DNN **N2001-286963** DNC **C2001-118888**
TI Apparatus used for assembly of tissue arrays comprises multicomponent parts e.g. array fabricator, sectioner, processing station.
DC B04 D16 S03
IN KAKAREKA, J W; KALLIONIEMI, O; KONONEN, J; LEIGHTON, S B; POHIDA, T J; SALEM, G H; SAUTER, G
PA (USSH) US DEPT HEALTH & HUMAN SERVICES; (USSH) US NAT INST OF HEALTH
CYC 95
PI WO 2001042796 A1 20010614 (200141)* EN 136p G01N035-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001024329 A 20010618 (200161) G01N035-00
EP 1238286 A1 20020911 (200267) EN G01N035-00
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL RO SI
ADT WO 2001042796 A1 WO 2000-US34043 20001213; AU 2001024329 A AU 2001-24329 20001213; EP 1238286 A1 EP 2000-988081 20001213, WO 2000-US34043 20001213
FDT AU 2001024329 A Based on WO 200142796; EP 1238286 A1 Based on WO 200142796
PRAI US 1999-171262P 19991215; US 1999-170461P 19991213
IC ICM G01N035-00
ICS **G01N001-31**
AB WO 200142796 A UPAB: 20021018
NOVELTY - An apparatus (I) for assembling tissue arrays comprises:
(i) a donor specimen compartmentalized station (Ia);
(ii) a computer readable specimen identifier (Ib);
(iii) a donor block scanner (Ic);
(iv) a tissue array fabricator (Id);
(v) a sectioner (Ie);
(vi) a processing station (If) sections to different biological markers that associate with substrates in the sections; and
(vii) a scanner (Ig).
DETAILED DESCRIPTION - (Ic) determines the specimen location in the carrier; (Id) obtains elongated specimen samples and places them in a recipient block; (Ie) sections the recipient block; (If) exposes sections to different biological markers; and (Ig) detects the presence of the biomarkers.
INDEPENDENT CLAIMS are also included for the following:
(1) an automated apparatus (II) for preparing tissue specimens comprising:
(a) a specimen source (IIa);
(b) a retriever (IIb);
(c) a constructor (IIc) that removes samples from specimens and arrays them in three dimensional (3D) arrays in substrates, where some of the places correspond to samples from different specimens; and
(d) a controller (IId) directing the retriever and constructor;
(2) an apparatus (III) for constructing tissue arrays from specimens comprising:
(a) a donor source (IIIa);
(b) (IIb);
(c) (IIc); and
(d) (IId) which identifies samples within the array;
(3) an automated device (IV) for performing analysis of biological specimens comprising:

(a) means (IVa) for storing specimens embedded in medium;
(b) (I);
(c) means (IVb) for reacting the corresponding sections of the recipient substrates with reagents;
(d) means for detecting a presence and/or quantity of reagent in the sections; and
(e) computer for recording subject information and correlating it with presence and/or quantity of reagent;
(4) performing (M1) analysis of specimens comprising:
(a) providing sections comprising samples;
(b) exposing the sections to reagents;
(c) obtaining images of the sections; and
(d) analyzing the images to determine if a reaction has occurred;
(5) performing (M2) analysis of specimens comprising:
(a) obtaining samples from one or more sample using (I); and
(b) performing one or more cell free analysis to observe marker(s);
(6) constructing (M3) tissue microarrays from donor specimens comprising:
(a) providing an array of blocks, each including a specimen embedded in medium and identifiable in an array;
(b) retrieving identified blocks from the array;
(c) obtaining samples from the blocks and inserting samples from the specimen into blocks; and
(d) sectioning the blocks;
(7) a computer implemented system (V) for rapid construction and analysis of tissue microarray sections comprising:
(a) a retriever obtaining recipient blocks from a block array and transferring them to a sectioner;
(b) the sectioner cutting sections from blocks for mounting on a solid support;
(c) a conveyer;
(d) a processor;
(e) an image analyzer imaging microarray sections; and
(f) a database storing tissue identifying information and information obtained from analysis of sections;
(8) examining (M4) a sample comprising:
(a) providing samples in an array;
(b) analyzing the samples; and
(c) examining to detect a marker;
(9) examining (M5) samples comprising:
(a) placing elongated samples at identifiable positions in a substrate;
(b) sectioning the substrate to provide copies of an array of the samples;
(c) disseminating one or more copy to others; and
(d) comparing an interpretation of one or more copy to an interpretation of one or more reference copy;
(10) making (M6) a library of tissue specimens comprising:
(a) placing elongated samples in a substrate; and
(b) sectioning the substrate to provide copies of an array of the samples;
(11) reviewing (M7) specimens comprising:
(a) providing sections comprising samples;
(b) obtaining images of sections after exposing the sections to reagents; and
(c) disseminating the images to recipients;
(12) standardizing (M8) pathological evaluations comprising:
(a) visualizing a specimen in a cross-section of a microarray of specimens, where the array comprises specimens in a 2D microarray;
(b) evaluating a biological characteristic of the specimen; and
(c) comparing the evaluation to a standard;
(13) training (M9) a person in histological analysis comprising providing a section of a microarray as in M8 (a) and tissue-specific

information for a specimen in the array, and comparing the evaluation of the person with information for the specimen;

(14) parallel tissue evaluation (M10) comprising:

(a) displaying a computer generated image of a specimen in a microarray;

(b) producing an image evaluation for a clinical parameter; and

(c) comparing the evaluation to a reference; and

(15) parallel evaluation (M11) of a cross-section of a cellular specimen comprising:

(a) visualizing a cross-section of the specimen in a microarray as in M8 (a), where an immunological analysis, histological stain or nucleic acid hybridization has been performed on each specimen;

(b) analyzing a cross-section by examining the results of (a) to evaluate a clinical parameter; and

(c) comparing the evaluation to a standard evaluation of each of the specimens; or

(d) (a), where the specimens have been produced in one place;

(e) analyzing the first cross-section by examining the results of (d) in the first specimen to evaluate a clinical parameter for one specimen; and

(f) visualizing a second cross-section of a second specimen in a microarray as in (d), where the specimen has been produced in another place;

(g) analyzing the second cross-section of the specimen by examining the results of (f) to evaluate a clinical parameter for the second specimen; and

(h) comparing the evaluations to compare the biological analyses.

USE - (I) is used to assemble tissue microarrays (claimed). (III) and M2 are used to detect a mutation in the sample (claimed). M4 is used to perform quality control and to compare reagent performance (claimed). M7 is used to evaluate a reagent for disease diagnosis or treatment, identifying cancer prognostic markers, assessing or choosing a therapy, or finding a biochemical therapy target, preferably in tumors (all claimed).

ADVANTAGE - The apparatus works at high speed and is automated.

DESCRIPTION OF DRAWING(S) - The drawing shows a system for automated, high-speed fabrication of tissue microarrays, showing a storage station for tissue blocks.

specimen source 102
retriever 104
detector 105
constructor 106
sectioner 108
reagent station 110
scanner 112
controller 114
digital camera 160

Dwg.1/29

FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-E01; B04-E05; B04-G01; B11-C07A4; B11-C07A7; B11-C08C; B11-C08D1; B11-C08D2; B11-C08E3; B11-C08E4; B11-C08E5; B12-K04A1; B12-K04F; D05-A02B; D05-H09; D05-H10; D05-H11; D05-H12; D05-H12D1; D05-H18A; D05-H18B
EPI: S03-E13D; S03-E15
TECH UPTX: 20010724

TECHNOLOGY FOCUS - COMPUTING AND CONTROL - Preferred Apparatus: (III) and (V) comprise a database with quantity and subcellular distribution of biological marker(s), specimen location, and sample and block identity and location. (I) comprises robotic transporter(s) and a database of subject information. The biomarker analysis information in (V) is correlated with sample information. (V) comprises stations, a conveyer, robotic arms and a controller.

Preferred Method: M6 comprises an electronic copy of the array. M1 and M7

comprise obtaining and storing digital images.

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Apparatus: The arrays in M4 and M5 are distributed electronically, in M4 via a communication channel, preferably a global system or computer readable medium, preferably a CD-ROM, CD-R, CD-RW, DVD or optical disc. The recipients in M7 indicate and communicate an image interpretation.
Preferred Method: Visualization in M8 is a computer generated image. M10 comprises repeating steps (a) - (c) for another specimen and repeating the steps until all specimens are evaluated. The evaluation is transmitted to a remote place and feedback received on it.

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Apparatus: The tissue sample in (III) is obtained and used in cell-free analysis. The analysis in M1 and (III) is of a biomolecule, preferably (partial) genomic DNA, mRNA, cDNA or a polypeptide.
Preferred Method: Cell-free analysis is DNA or protein sequencing, RFLP determination, Southern, Northern or Western blotting or other DNA or RNA hybridization, single-strand conformational polymorphism determination, mobility shift DNA binding assays, protein gel electrophoresis, protein purification, chromatography, immunoprecipitation, ELISA or other immuno-detection, isolation of antigenic biomolecules, PCR, RT-PCR, differential display, SAGE and PTT. M1 comprises exposing section(s) to 20, preferably 100, or more reagents and obtaining subject information to associate with results, and quantifying the marker-sample reaction. M1 and M4 comprise retrieving elongated specimens from a block array, fixing them in parallel in a substrate which is sectioned. The molecular analysis is of tissue, cellular or subcellular marker distribution. 20, preferably 100, or more specimens were from different subjects. M4 comprises analyzing array copies in the same way, using a specific binding agent, preferably an antibody or nucleic acid probe. One of the array copies is reference analyzed by observer(s) who compare results with a reference. The observers are researchers, trainees, preferably test takers who propose an interpretation, or an automated analysis system. The reagent is an immunohistochemical or nucleic acid marker. The array is a microarray containing 100, preferably 1000 or more samples at coordinates, and a uniform matrix. The samples are from pathology specimens, preferably non-neoplastic and/or neoplastic tissue, or comparative specimens of tumor development stages or type, progression of dynamic tissue, preferably uterine endocrine tissue, samples from the same tissue, or specimens of a tumor and its metastases. The samples in M5 comprise a multiple tissue library. In M7 100 or more tissue specimens in each section are exposed to 100 or more reagents and the reaction is quantified. The biological sample is from a tumor.
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preparation: No details are given on preparation of (I).
Preferred Apparatus: (II) further comprises a sectioner to section the arrays for carrying the samples, controlled by (IId). (IId) and (III) comprise a recorder. (II) comprises a scanner, biomarker station, and image analyzer. (II) comprises specimens at assigned locations and embedded in medium stored by carriers in (IIa). The carriers are identifiable by the controller and (IIa) comprises recipient stations for the carriers. (II) comprises a locator and provides a reference indicium with an elongated marker and comprising parallel elongated reference indicia. (IIa) has parallel top and bottom surfaces with the indicium perpendicular to them. A region of interest is located by measuring a distance from the reference indicium. (IId) in (III) recognizes identifiers via (IIb). The specimens are embedded in medium blocks; (III) also comprises a locator for marking the blocks. (IIIa) comprises a storage station, a positioning device, and a robotic arm. (IIIb) comprises a holder and a reciprocal punch comprising a positioning device. (III) comprises a microscope, a recipient block source, a sectioner, a processing station, an imager with a processor, and a detector with a

quantifier and a locator, and a storage device. The donor and the recipient sources are a single station. The retriever returns the specimens to the source after array construction. (I) comprises a controller, a computer readable identifier, embedded, elongated specimens, and a processing station.
Preferred Method: M3 comprises determining and storing specimen and region of interest coordinates and marking the donor block with an indicator. M3 and M7 comprise punching receptacles and samples for placing in the recipient block, retrieving, positioning via a retriever, sectioning a recipient block, and mounting the sections. The samples are obtained from region(s) of interest determined by examining a thin section of the donor block. Recipient blocks are stored in an array. Specimen identity and recipient block location is stored. Recipient blocks are marked with tissue identity and block location information. Microarray sections are treated with reagent(s) and analyzed for markers. Array copies are included with a test kit in M5, and combined to provide a reference interpretation. M6 comprises associating an electronic identifier with each array position. M7 comprises exposing sections to reagents and the recipients analyze the images, correlating subject information with image interpretation. M7 comprises storing tissue and recipient block information.

ABEX UPTX: 20010724
EXAMPLE - No suitable example given.

L55 ANSWER 13 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **2001-266085** [27] WPIX
DNN **N2001-190265** DNC **C2001-080582**
TI Evaluation of clinical utility of target molecules, involves providing tissue samples and target molecule, staining specifically, applying in high-throughput manner and determining stained target molecule.
DC B04 D16 J04 S03
IN COHEN, J
PA (COHE-I) COHEN J
CYC 21
PI WO 2001022086 A1 20010329 (200127)* EN 32p G01N033-53
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 1135680 A1 20010926 (200157) EN G01N033-53
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2003510571 W 20030318 (200321) 36p G01N033-58
ADT WO 2001022086 A1 WO 2000-US26113 20000922; EP 1135680 A1 EP 2000-965348 20000922, WO 2000-US26113 20000922; JP 2003510571 W WO 2000-US26113 20000922, JP 2001-525405 20000922
FDT EP 1135680 A1 Based on WO 200122086; JP 2003510571 W Based on WO 200122086
PRAI US 1999-155665P 19990924
IC ICM G01N033-53; G01N033-58
ICS C12M001-00; C12M001-34; C12M001-36; C12M001-38; C12M001-40; C12M003-00; C12Q001-02; C12Q001-68; G01N001-28; **G01N001-30**; G01N033-567; G01N033-574; **G01N035-00**; G01N037-00
AB WO 200122086 A UPAB: 20010518
NOVELTY - Clinical utility of target molecules (22) is evaluated by providing large quantity of different tissue samples (20), target molecule and a stain that specifically binds to the target molecule in situ. The stain is applied to the tissue sample in a high-throughput manner and the extent to which the stain has bound to the target molecule in the tissue sample is determined.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a tissue microarray.
USE - For evaluating clinical utility such as designing or prescribing a drug or therapy that interacts with the target molecule (nucleic acids, proteins, antigens, carbohydrates and lipids) in a tissue such as sections of organ, tumor section, body fluids, smears, frozen sections, cytology preparation and cell lines.

ADVANTAGE - The method enables to evaluate multiple targets at the same time. The tissue microarray and automated staining instrumentation provide speed and high throughput of samples. The method provides accurate comparison of results from different tissues, each having been treated precisely in the same manner. Each sample can receive an individualized staining or treatment protocol. The temperature of the slide mounted with tissue can be controlled. Narrow temperature range is maintained throughout the slide surface providing uniform heating.

DESCRIPTION OF DRAWING(S) - The figure shows schematic illustration of evaluation method of clinical utility of target molecules.

Different tissue samples 20

Target molecules 22

Dwg.1/6

FS CPI EPI

FA AB; GI; DCN

MC CPI: B11-C07B; B11-C07B1; B11-C08E; B11-C09; B12-K04A; B12-K04E; D05-H09; D05-H10; J04-B01B

EPI: S03-E14H4

L55 ANSWER 14 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN

AN **2001-090846** [10] WPIX

DNN **N2001-068859**

TI Method for automatically producing tissue slides from tissue sample within sample block using laser position sensor.

DC S02 S03 S05

IN GIBSON, J F; PASTERNACK, G R; VONEIFF, J

PA (CULT-N) CULTERRA LLC; (GIBS-I) GIBSON J F; (VONE-I) VONEIFF J

CYC 91

PI WO 2000062035 A1 20001019 (200110)* EN 49p G01N001-06

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000042126 A 20001114 (200110) G01N001-06

EP 1171760 A1 20020116 (200207) EN G01N001-06

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

US 6387653 B1 20020514 (200239) G01N001-30 <--

US 2003022271 A1 20030130 (200311) G01N033-48

ADT WO 2000062035 A1 WO 2000-US9302 20000407; AU 2000042126 A AU 2000-42126 20000407; EP 1171760 A1 EP 2000-921863 20000407, WO 2000-US9302 20000407; US 6387653 B1 US 1999-289181 19990409; US 2003022271 A1 Div ex US 1999-289181 19990409, US 2002-91173 20020306

FDT AU 2000042126 A Based on WO 200062035; EP 1171760 A1 Based on WO 200062035; US 2003022271 A1 Div ex US 6387653

PRAI US 1999-289181 19990409; US 2002-91173 20020306

IC ICM G01N001-06; **G01N001-30**; G01N033-48

ICS C12M001-38; **G01N001-31**

AB WO 200062035 A UPAB: 20010220

NOVELTY - The orientation and depth of a sample embedded in a support is determined with a laser optical sensor. The sample is oriented to maximize the area presented to a microtome so a slice can be removed from the sample. The slice is then placed on a slide.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for an apparatus for automatically producing tissue slides from a tissue sample within a sample block.

USE - For automatically producing tissue slides for histology.

ADVANTAGE - Automatically performs the functions of the microtome and technician.

DESCRIPTION OF DRAWING(S) - The drawing shows a flowchart of the method for automatically producing tissue slides.

Dwg.1c/5
FS EPI
FA AB; GI
MC EPI: S02-A03B4; S03-E13A; S03-E13D; S03-E14H; S03-E15; S05-C03

L55 ANSWER 15 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1999-572308** [48] WPIX
DNN **N1999-421731** DNC **C1999-167157**
TI Automated microscope slide staining apparatus has arm moveable in three dimensions.
DC B04 B07 D13 D16 J04 S03
IN CHANG, Z; KALRA, K L; SHUI, J; ZHANG, J Z
PA (BIOG-N) BIOGENEX LAB
CYC 22
PI WO 9949295 A1 19990930 (199948)* EN 61p G01N001-30 <--
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
AU 9869417 A 19991018 (200009) G01N001-30 <--
EP 1066502 A1 20010110 (200103) EN G01N001-30 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002507738 W 20020312 (200220) 68p G01N001-30 <--
US 6495106 B1 20021217 (200307) G01N021-00
ADT WO 9949295 A1 WO 1998-US5919 19980324; AU 9869417 A AU 1998-69417 19980324, WO 1998-US5919 19980324; EP 1066502 A1 EP 1998-915168 19980324, WO 1998-US5919 19980324; JP 2002507738 W WO 1998-US5919 19980324, JP 2000-538216 19980324; US 6495106 B1 WO 1998-US5919 19980324, US 2000-646695 20001215
FDT AU 9869417 A Based on WO 9949295; EP 1066502 A1 Based on WO 9949295; JP 2002507738 W Based on WO 9949295; US 6495106 B1 Based on WO 9949295
PRAI WO 1998-US5919 19980324
IC ICM **G01N001-30**; G01N021-00
ICS B01L003-00; B01L003-02; B05B007-00; B05C005-00; B05C011-02; B05C015-00; G01N001-00; G01N001-10; G01N031-00; G01N033-00; **G01N035-00**; **G01N035-08**; **G01N035-10**; G02B021-34
AB WO 9949295 A UPAB: 19991122
NOVELTY - The arm (30) is moveable on a frame. Positive or negative gas pressure may be applied to the reagent tip head (40) to withdraw or dispense volumes of liquid. The wash tip (41) and blow tip (42) selectively dispense gas and liquid. The framework includes a holder for pipette tips selectively attached to the reagent tip head, a reagent vial holder, and a microscope slide holder.

DETAILED DESCRIPTION - A controller controls all operations of the apparatus. The frame is housed in a cabinet which has a closeable access port. The arm remains in a known position in the absence of power. The arm moves along independent X,Y, and Z axes independently, the X and Y axes being oriented in a horizontal plane. The apparatus includes a number of individual liquid pumps in selectable fluid communication with the wash tip. Gas pressure is supplied by a moveable piston that controls movement of a liquid in a supply conduit between a liquid reservoir and reagent tip head. This allows precise withdrawal or dispensing of liquid into or from a pipette tip engaged with the reagent tip head.

USE - The apparatus provides automated staining of cells and tissues on microscope slides.

ADVANTAGE - The system is readily programmable to allow automated staining of individual microscope slides with different techniques in a single operation without user intervention. It uses staining reagent efficiently with a minimum of waste. It minimizes the risk of cross-contamination between slides, reagents and solutions.

DESCRIPTION OF DRAWING(S) - The figure shows a side view of the apparatus.
moveable arm 30
reagent tip head 40

wash tip 41
blow tip 42
Dwg.9C/18
FS CPI EPI
FA AB; GI
MC CPI: B11-C09; D05-H09; J04-B01
EPI: S03-E14H

L55 ANSWER 16 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1999-550890** [46] WPIX
CR 1999-550834 [46]; 2000-271078 [23]; 2002-490215 [52]
DNN **N1999-407643** DNC **C1999-160663**
TI Automated molecular pathology apparatus.
DC B04 D16 J04 S03
IN CHRISTENSEN, K; LEMME, C D; MACREA, E R; RICHARDS, W
PA (VENT-N) VENTANA MEDICAL SYSTEMS INC
CYC 85
PI WO 9944030 A1 19990902 (199946)* EN 50p G01N001-30 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD
GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG US UZ VN YU ZW
AU 9928796 A 19990915 (200004)
EP 1073892 A1 20010207 (200109) EN G01N001-30 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2002505089 W 20020219 (200216) 60p C12M001-00
US 6582962 B1 20030624 (200343) G01N035-00 <--
ADT WO 9944030 A1 WO 1999-US4181 19990226; AU 9928796 A AU 1999-28796 19990226; EP 1073892 A1 EP 1999-909630 19990226, WO 1999-US4181 19990226; JP 2002505089 W WO 1999-US4181 19990226, JP 2000-533730 19990226; US 6582962 B1 Provisional US 1998-76198P 19980227, CIP of US 1999-259240 19990226, US 2000-690296 20001017
FDT AU 9928796 A Based on WO 9944030; EP 1073892 A1 Based on WO 9944030; JP 2002505089 W Based on WO 9944030; US 6582962 B1 CIP of US 6296809
PRAI US 1998-76198P 19980227; US 1999-259240 19990226; US 2000-690296 20001017
IC ICM C12M001-00; **G01N001-30**; **G01N035-00**
ICS B01L003-02; B01L009-00; C12M001-34; C12M003-00; C12N015-00; C12Q001-68; F27D011-00; G01N001-10; G01N033-48; **G01N035-02**
AB WO 9944030 A UPAB: 20030707
NOVELTY - Tissue samples which are mounted on microscope slides (37) for automatic treatment in an apparatus (10). The slides are mounted in a carousel (34) for the treatment. Each slide has an individual heating element that can be individually controlled. The treatment process may include staining and heating the slides.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) an apparatus for treating molecular pathology samples using the method detailed above; and

(2) a microscope slide heating system for maintaining different target temperatures for microscope slides.

USE - The method is useful as a treatment method for automated molecular pathology samples with an associated apparatus. The method is used to remove embedded media from a tissue section mounted on a slide, performing in situ PCR to amplify a target nucleic acid in cells mounted on a microscope slide.

ADVANTAGE - Each slide can be given individual treatment to suit the particular sample.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic of the apparatus.
Apparatus 10

Carousel 34
Individual slides 37
Slip ring assembly 56
Dwg.10/16
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-B04L; B04-E01; B04-E05; B04-F01; B04-F11; B04-G01; B04-L04A; B11-C08E3; B11-C08E5; B11-C09; B12-K04; B12-K04F; D05-H09; D05-H11; D05-H12D1; J04-B01B
EPI: S03-E13D
TECH UPTX: 19991110
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: The samples are preferably stained with a nucleic acid probe or primer, an antibody or dye. An automated process preferably follows treatment comprising washing, rinsing, drying, covering, mixing, incubating and cooling. The individual slides can be heated up to about 94 degreesC. A fluid is preferably applied to the sample during treatment to remove paraffin. The treatment is especially DNA denaturation, DNA renaturation, probe hybridization or post-hybridization washing.
Preferred Sample: The sample is preferably a tumor section, an organ section, a frozen section, a bodily fluid, a smear, a cytology prep and a cell line.

L55 ANSWER 17 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1999-550834** [46] WPIX
CR 1999-550890 [46]; 2000-271078 [23]; 2002-490215 [52]
DNC **C1999-160628**
TI Apparatus for aspirating and dispensing of reagents using probe connected to syringe pump.
DC B04 D16 J04
IN FORD, A; MCDANIEL, D; REINHARDT, K; RICHARDS, W; RIZZO, V; SHOWALTER, W
PA (VENT-N) VENTANA MEDICAL SYSTEMS INC; (VENT-N) VENTONA MEDICAL SYSTEMS INC; (FORD-I) FORD A; (MCDA-I) MCDANIEL D; (REIN-I) REINHARDT K; (RICH-I) RICHARDS W; (RIZZ-I) RIZZO V; (SHOW-I) SHOWALTER W
CYC 84
PI WO 9943434 A1 19990902 (199946)* EN 41p B01L003-02
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9928834 A 19990915 (200004)
EP 1056541 A1 20001206 (200064) EN B01L003-02
R: DE FR GB IT
US 2001010936 A1 20010802 (200147) G01N001-10
CN 1297529 A 20010530 (200156) G01N001-30 <--
JP 2002504694 W 20020212 (200215) 59p G01N035-10 <--
US 6405609 B1 20020618 (200244) B01L003-02
US 6537818 B2 20030325 (200325) G01N035-08 <--
ADT WO 9943434 A1 WO 1999-US4379 19990226; AU 9928834 A AU 1999-28834 19990226; EP 1056541 A1 EP 1999-909681 19990226, WO 1999-US4379 19990226; US 2001010936 A1 Provisional US 1998-76198P 19980227, Div ex US 1999-259238 19990226, US 2001-825596 20010404; CN 1297529 A CN 1999-805028 19990226; JP 2002504694 W WO 1999-US4379 19990226, JP 2000-533222 19990226; US 6405609 B1 Provisional US 1998-76198P 19980227, US 1999-259238 19990226; US 6537818 B2 Provisional US 1998-76198P 19980227, Div ex US 1999-259238 19990226, US 2001-825596 20010404
FDT AU 9928834 A Based on WO 9943434; EP 1056541 A1 Based on WO 9943434; JP 2002504694 W Based on WO 9943434; US 6537818 B2 Div ex US 6405609
PRAI US 1998-76198P 19980227; US 1999-259238 19990226; US 2001-825596 20010404
IC ICM B01L003-02; G01N001-10; **G01N035-08**; **G01N035-10**

ICS B01L003-00; G01N001-00; G01N021-00
ICA **G01N001-30**
AB WO 9943434 A UPAB: 20030429
NOVELTY - An aspirating reagent device having a probe (119) which at one end is formed as a shaped surface with a hole (144) connected to tubing (142), is new. A vial insert (132) has a shaped upper surface with a hole (154). A portion of the shaped surface of the probe engages with a portion of the upper surface of the vial insert during aspiration.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of aspirating reagent from a reagent vial using the device above.
USE - The device is useful for aspirating and dispensing reagents applied to slides for histochemical or cytological analysis, especially for staining purposes.
ADVANTAGE - The system dispenses reagents accurately while minimizing evaporation and cross-contamination.
DESCRIPTION OF DRAWING(S) - The figure shows a front cross-sectional view of the probe, vial insert and reagent vial.
probe 119
vial insert 132
tubing 142
probe hole 144
cavity 152
hole in vial insert 154
dip tube 156
Dwg.3/8
FS CPI
FA AB; GI
MC CPI: B11-C03; B12-K04; D05-H09; J04-B01
TECH UPTX: 19991110
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Device: The upper surface of the vial insert is preferably conical and the one end of the probe is hemispherical. The hole (154) forms a vial transition area and includes a dip tube (156) extending into the reagent vial. A cavity (152) is formed when the probe and vial insert engage. The tubing (142) is connected to a syringe for drawing reagent from the vial. The outer surface of the vial insert has ribs which press against the inside of the vial neck. The ribs are discontinuous to provide a circuitous pathway allowing air to flow during aspiration of the reagent from the vial. After aspiration of the reagent, the probe is moved to a dispense and washing station.

L55 ANSWER 18 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1999-180537** [15] WPIX
DNN **N1999-132589** DNC **C1999-052622**
TI Dispenser for consistently placing controlled amount of fluid on a slide - has in line dispensing and reservoir chambers.
DC B04 D16 J04 S03
IN DRUYOR-SANCHEZ, B; FORD, A; HEILMAN, B; MCDANIEL, D; MCGRAW, B; MEAD, S; RICHARDS, W; RIZZO, V; SHOWALTER, W
PA (VENT-N) VENTANA MEDICAL SYSTEMS; (VENT-N) VENTANA MEDICAL SYSTEMS INC; (DRUY-I) DRUYOR-SANCHEZ B; (FORD-I) FORD A; (HEIL-I) HEILMAN B; (MCDA-I) MCDANIEL D; (MCGR-I) MCGRAW B; (MEAD-I) MEAD S; (RICH-I) RICHARDS W; (SHOW-I) SHOWALTER W
CYC 82
PI WO 9908090 A1 19990218 (199915)* EN 161p G01N001-14
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9888261 A 19990301 (199928) G01N001-14
US 6045759 A 20000404 (200024) G01N035-10 <--
EP 1004013 A1 20000531 (200031) EN G01N001-14

R: DE FR GB IT

US 6093574	A	20000725	(200038)		G01N001-30	<--
US 6192945	B1	20010227	(200114)		B67D005-06	
JP 2001512823	W	20010828	(200156)	169p	G01N001-00	
US 2002034456	A1	20020321	(200224)		G01N031-00	
US 6416713	B1	20020709	(200253)		G01N035-10	<--

ADT WO 9908090 A1 WO 1998-US16604 19980811; AU 9888261 A AU 1998-88261 19980811; US 6045759 A CIP of US 1997-909335 19970811, US 1997-995052 19971219; EP 1004013 A1 EP 1998-939901 19980811, WO 1998-US16604 19980811; US 6093574 A US 1997-909335 19970811; US 6192945 B1 CIP of US 1997-909335 19970811, Div ex US 1997-995052 19971219, US 2000-483606 20000114; JP 2001512823 W WO 1998-US16604 19980811, JP 2000-506511 19980811; US 2002034456 A1 CIP of US 1997-909335 19970811, Div ex US 1997-995052 19971219, Cont of US 2000-483218 20000114, US 2001-896649 20010629; US 6416713 B1 CIP of US 1997-909335 19970811, Div ex US 1997-995052 19971219, US 2000-483218 20000114

FDT AU 9888261 A Based on WO 9908090; EP 1004013 A1 Based on WO 9908090; US 6192945 B1 CIP of US 6045759, Div ex US 6093574; JP 2001512823 W Based on WO 9908090; US 2002034456 A1 Div ex US 6045759, CIP of US 6093574; US 6416713 B1 Div ex US 6045759, CIP of US 6093574

PRAI US 1997-995052 19971219; US 1997-909335 19970811; US 2000-483606 20000114; US 2000-483218 20000114; US 2001-896649 20010629

IC ICM B67D005-06; G01N001-00; G01N001-14; **G01N001-30**; G01N031-00; **G01N035-10**

ICS **G01N035-10**

AB WO 9908090 A UPAB: 19990416

NOVELTY - The dispenser consists of a reservoir chamber (408) and a dispensing chamber (412) arranged in line. Fluid is transferred between the two chambers by the pressure differential between them. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also include for the following: (a) a method of assembling the fluid dispenser; (b) a method of filling and priming the dispenser (c) an automated biological reaction system having a slide support carousel with a drive, a consistency pulse application station with a nozzle for directing a stream of fluid onto a slide less than 35 degrees from the horizontal, and a volume adjust application station for dropping a predetermined amount of fluid onto the slide; (d) a method of placing a consistent amount of fluid on a slide; (e) a method of washing a slide; (f) an automated biological reaction apparatus; (g) an automated biological reaction system including a host and a remote device; (h) a method of generating a run program in an automated biological system; (i) a memory management system for the apparatus; (j) a method for updating dispenser information; (k) a method for programming a memory device for the system, and (l) a valve for passing a fluid based on a pressure differential. The illustrated embodiment shows a prefilled fluid dispenser. It has a snap cap (404) and a barrel which includes the reservoir chamber, a valve adjacent the reservoir chamber, and a coupler (428) including the dispense chamber. To operate the reaction system more reliably, it is designed in modular pieces with higher functions performed by a host device. The execution of staining operations is performed by remote devices. Data is loaded into a memory used by an operator to update databases.

USE - An automated system is used to produce slides used in histological diagnosis or the study of tissue morphology.

ADVANTAGE - Data relating to reagents, including serial numbers, reagent types, lot numbers, expiration dates, and dispenser type are downloaded efficiently and reliably. A precise amount of buffer and reagent are added to the slide. The fluid dispenser is reliable, easy to manufacture and compact. It is easy to prime.

DESCRIPTION OF DRAWING(S) - This shows an exploded view of a prefilled dispenser. (404) snap cap; (408) reservoir chamber; (412) dispensing chamber; (428) coupler.

Dwg.14A/29

FS CPI EPI

FA AB; GI
MC CPI: B11-C03; D05-H09; J04-B01
EPI: S03-E13B1; S03-E15

L55 ANSWER 19 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1991-281595 [38] WPIX
CR 1997-107522 [10]; 1997-384677 [35]; 1997-401855 [37]; 1997-401856 [37]; 2001-374266 [39]; 2002-194906 [25]; 2002-412948 [44]; 2002-626276 [67]; 2003-312262 [30]
DNN N1991-215217 DNC C1991-122071
TI Automated biological reaction appts. - includes slide support and reagent supply carousel which provides rapid, reliable and reproducible results.
DC B04 D16 J04 S03
IN COPELAND, K G; GROGAN, T M; HASSEN, C; HUMPHREYS, W R; LEMME, C E; MILLER, P C; RICHARDS, W L; SHOWALTER, W A; HUMPHREYS, W
PA (VENT-N) VENTANA MEDICAL SYSTEMS INC; (VENT-N) VENTANA MEDICAL SYSTEMS; (IMMU-N) IMMUNODIAGNOSTICS INC; (IMMU-N) IMMUNODIAGNOSTICS
CYC 17
PI WO 9113335 A 19910905 (199138)*
RW: BE CH DE DK ES FR GB GR IT LI LU NL SE
W: CA JP US
EP 517835 A1 19921216 (199251) EN 114p G01N001-00
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 05504627 W 19930715 (199333) 34p G01N035-04 <--
EP 517835 B1 19960207 (199610) EN 64p G01N001-30 <--
R: BE CH DE DK ES FR GB IT LI NL
DE 69117052 E 19960321 (199617) G01N001-30 <--
CA 2077452 C 20001024 (200059) EN B01L007-02
ADT EP 517835 A1 EP 1991-906210 19910228, WO 1991-US1149 19910228; JP 05504627 W JP 1991-505990 19910228, WO 1991-US1149 19910228; EP 517835 B1 EP 1991-906210 19910228, WO 1991-US1149 19910228; DE 69117052 E DE 1991-617052 19910228, EP 1991-906210 19910228, WO 1991-US1149 19910228; CA 2077452 C CA 1991-2077452 19910228, WO 1991-US1149 19910228
FDT EP 517835 A1 Based on WO 9113335; JP 05504627 W Based on WO 9113335; EP 517835 B1 Based on WO 9113335; DE 69117052 E Based on EP 517835, Based on WO 9113335; CA 2077452 C Based on WO 9113335
PRAI US 1990-488601 19900302
REP US 4298571; US 4406547; US 4447395; US 4708886; US 4774055; US 4781891; US 4815978; US 4919887; US 4965049
IC ICM B01L007-02; G01N001-00; **G01N001-30**; **G01N035-04**
ICS **G01N001-31**; G01N021-75; G01N033-483; G01N033-50; **G01N035-02**; **G01N035-10**
AB WO 9113335 A UPAB: 20030513
The description refers to an automatic reaction appts. including a carousel (24) which moves respective slide supports (26) successively through a reagent delivery station in which a reagent delivery device (18) feeds a selected one of a number of reagents (12) on a reagent carousel (10) onto a slide supported at the delivery station. The slide support carousel then moves the slides sequentially through an evapn. inhibiting liq. supply station, a vortex agitation station, a heating station, a rinsing station, and a draining station. The appts. includes a reader for reading **bar codes** on slides on the slide support carousel, and means for detecting and selcting the appropriate reagent at the delivery station.

USE/ADVANTAGE - In a wide variety of biological assays such as automatic immunostaining of tissue sections, in-situ DNA analysis, immunoassays such as ELISA, etc. Provides rapid, reliable, and reproducible results in a variety of assays and is cost effective in terms of equipment, reagent and labour costs. Different reagent treatments can be individually performed for each of the various samples by appropriate programming of the appts.

FS CPI EPI
FA AB; GI

MC CPI: B04-B04A1; B11-C08; B12-K04; D05-H09; D05-H12; J04-B01
EPI: S03-E13D; S03-E14H4

ABEQ JP 05504627 W UPAB: 19931119
Automatic reaction appts. includes a carousel (24) which moves respective slide supports (26) successively through a reagent delivery station in which a reagent delivery device (18) feeds a selected one of a number of reagents (12) on a reagent carousel (10) onto a slide supported at the delivery station. The slide support carousel then moves the slides sequentially through an evapn. inhibiting liq. supply station, a vortex agitation station, a heating station, a rinsing station, and a draining station. The appts. includes a reader for reading **bar codes** on slides on the slide support carousel, and means for detecting and selecting the appropriate reagent at the delivery station.
USE/ADVANTAGE - In a wide variety of biological assays such as automatic immuno-staining of tissue sections, in-situ DNA analysis, immunoassays such as ELISA, etc. Provides rapid, reliable, and reproducible results in a variety of assays and is cost effective in terms of equipment, reagent and labour costs. Different reagent treatments can be individually performed for each of the various samples by appropriate programming of the appts.

ABEQ EP 517835 B UPAB: 19960308
A biological reaction apparatus for dispensing a selected reagent to a sample, said biological reaction apparatus having: a reagent carousel (10) having a plurality of reagent container supports (11) thereon; homing and indexing means (36,346) operatively coupled to the reagent carousel (10), for identifying the position of each reagent container support (11) with reference to a home position; and drive means (14,16) engaging the reagent carousel (10) and operatively coupled to said homing and indexing means (36,346) for rotating the reagent carousel (10) and positioning a preselected reagent container support (11) in a reagent supply zone wherein said reagent supply zone is oriented so that a reagent in a container in said preselected reagent container support is dispensable to a sample characterised in that said reagent container supports (11) are arranged to accommodate a reagent container such that it is positioned directly above a sample wherein in the reagent supply zone whereby reagent is dispensable from a lower end of said container directly onto a sample.
Dwg.15/34

L55 ANSWER 20 OF 20 WPIX COPYRIGHT 2003 THOMSON DERWENT on STN
AN **1988-113420** [17] WPIX
DNN **N1988-086171** DNC **C1988-050805**
TI Automatic colouration of specimens - for microscopic examination with support for pick up and releasing mounts.
DC D16 J04 P42 S03
IN TAKEUCHI, T
PA (SAKU-N) SAKURA SEIKI KK; (TIYO-N) TIYODA SEISAKUSHO KK; (TOYO-N) TOYODA SEISAKUSHO K
CYC 4
PI DE 3634976 A 19880421 (198817)* 13p
GB 2196428 A 19880427 (198817)
US 4738824 A 19880419 (198818) 12p
FR 2605105 A 19880415 (198822)
GB 2196428 B 19900523 (199021)#
DE 3634976 C2 19970911 (199740) 14p G01N001-28
ADT DE 3634976 A DE 1986-3634976 19861014; US 4738824 A US 1986-919184 19861015; FR 2605105 A FR 1986-14236 19861014; DE 3634976 C2 DE 1986-3634976 19861014
PRAI DE 1986-3634976 19861014
IC B01L011-00; B05C003-02; G01N001-28; G01N033-48; **G01N035-06**; G01N037-00
ICM G01N001-28
ICS B01L011-00; B05C003-02; **G01N001-30**; G01N033-48; **G01N035-06**; G01N037-00

AB DE 3634976 A UPAB: 19930923
Appts. for the automatic colouration of preparations for the microscopic examination has a transportation device (T) which conveys every preparation mount (3) from one container to others for different reagents. This device (T) has a support (7) to hold each preparation mount and to release it in the next container. The support can be moved lengthways sideways and vertically in the casing (1). A controller governs the movement of the transportation device in accordance with a colouration programme.
ADVANTAGE - Appts. can perform several colouration processes simultaneously with a good efficiency.
1/15
FS CPI EPI GMPI
FA AB; GI
MC CPI: D05-H09; J04-B
EPI: S03-E13D
ABEQ GB 2196428 B UPAB: 19930923
An appts. for dyeing specimens automatically preparatory to microscopic examination, comprising: (a) a casing (1) having a front side; (b) a main table (2) provided in said casing; (c) a plurality of vessels (v) contg. various reagents and arranged regularly on the main table (2) longitudinally and laterally thereof; (d) specimen cages (3) each having means for removably accommodating at least one piece of slide glass (111) with a specimen (112) thereon, and (e) means (T) operable for transporting said specimen cages (3) over said vessels longitudinally and laterally of said main table from one vessel to another; characterised in that said appts. further comprises: (f) an upper table (2a) provided in said casing (1) and disposed above a front part of the main table (2) at a position toward the front side of the casing (1) thereby to provide an openable front space between the two tables, through which space the vessels on the main table can be taken out of the casing; (g) a plurality of other vessels arranged on the upper table (2a) longitudinally thereof; (h) each of said specimen cages (3) having hanging means (116, 90, 90a, 90b) provided on the top thereof; (i) said transporting means (T) being also operable to transport said specimen cages (3) over the vessels on said upper table (2a) from one vessel to another, said transporting means having a support head (7) with finger means (75, 76; 82, 83) automatically operable to be engaged with or disengaged from said hanging means of each of the specimen cages, said transporting means also having means (65, 66, 67, 72) for moving said support head (7) vertically to cause each specimen cage held thereby to move into and out of one of the vessels; and (j) a controller (120) for controlling said transporting means (T) to cause the same to move longitudinally, laterally and vertically and to cause said finger means to open and close for engagement with and disengagement from said hanging means, said controller controlling
ABEQ US 4738824 A UPAB: 19930923
Appts. comprises an upper table over the front part of a main table (2) and within a casing (1) having an open front, an array of reagent vessels (v) on the main table and other vessels on the upper table, and specimen cages (3) each to removable hold at least one slide glass with a specimen.
The cages can be moved longitudinally and laterally over the vessels by a support head (7) with fingers automatically operable to engage the transporting system (T) and which is movable vertically into and out of the vessels. A controller regulates all movements and operation of the fingers in accordance with a staining programme, such that one cage can be left in a vessel while the head moves another.
USE/ADVANTAGE - For hospital or laboratory use, is compact and efficient in performing multiple dyeing operations.
1/15

=> d his

```
     (FILE 'HOME' ENTERED AT 15:47:16 ON 03 AUG 2003)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 15:47:29 ON 03 AUG 2003
               E US2000-483248/AP,PRN
               E WO2001-US512/AP,PRN
               E LAB VISION/PA,CS
L1          173 S E5-E20
               E TSEUNG K/AU
L2            4 S E5
               E TAKAYAMA G/AU
L3            5 S E3,E7
               E RHETT N/AU
L4            4 S E4
               E CORL M/AU
L5            2 S E4
L6            4 S L1 AND L2-L5
L7            2 S L2-L5 NOT L6
               SEL PN APPS L6

     FILE 'WPIX' ENTERED AT 15:50:57 ON 03 AUG 2003
L8            3 S E1-E11
               E LAB VISION/PA
L9            4 S E4
               E VISI/PACO
L10         773 S E3-E14
               E TSEUNG K/AU
L11           5 S E3,E4
               E TAKAYAMA G/AU
L12           9 S E3,E4
               E RHETT N/AU
L13           4 S E4
               E CORL M/AU
L14           4 S E3,E5
               E G01N001-30/IC,ICM,ICS
               E G01N001-30/IC,ICM,ICS
L15         793 S E3-E8
               E G01N001-30/ICA,ICI
L16          37 S E3-E5
L17           6 S L8-L14 AND L15,L16
L18           5 S G01N035/IC,ICM,ICS,ICA,ICI AND L8-L14
L19           8 S L17,L18
               SEL DN AN 1 2 8
L20           3 S L19 AND E1-E7
L21           5 S L19 NOT L20
L22           9 S L8,L9,L11-L14 NOT L17-L21
               SEL DN AN 2 4
L23           2 S L22 AND E8-E13
L24           5 S L20,L23
L25          70 S L8-L14 AND G01N/IC,ICM,ICS,ICA,ICI
L26           6 S L25 AND ?STAIN?/BIX
L27           5 S L24 AND L26
L28           1 S L26 NOT L27

     FILE 'HCAPLUS' ENTERED AT 16:04:03 ON 03 AUG 2003

     FILE 'WPIX' ENTERED AT 16:05:09 ON 03 AUG 2003
L29           7 S (WO911335 OR WO9201919 OR US5355439 OR US5654199 OR US5573727
L30           6 S L29 NOT L27
L31           6 S L30 AND G01N/IC,ICM,ICS,ICA,ICI
L32         822 S L15,L16
L33           8 S L32 AND (BARCOD? OR BAR COD?)/BIX
L34           0 S L32 AND T04-A03B1/MC
```

```
L35           0 S L32 AND T05-G02B1/MC
L36          69 S L32 AND G01N035/IC,ICM,ICS,ICA,ICI
L37          65 S L36 NOT L27,L31
L38          94 S L32 AND G01N001-31/IC,ICM,ICS
L39         733 S L32 AND G01N001-30/IC,ICM,ICS
L40          34 S L38 AND L39
L41          63 S L37 AND L38,L39
L42          15 S L40 AND L41
L43          94 S L38,L40,L42
L44           4 S L33 AND L43
L45           4 S L33 NOT L44
L46          87 S L43 NOT L44,L45,L27,L31
                SEL DN AN 18 20 21 22 28 36 37 41 48
L47           9 S L46 AND E14-E34
L48          13 S L44,L47 NOT L27,L31
L49           3 S L38 NOT L46-L48
L50           0 S L49 NOT L27,L31
L51         693 S L39 NOT L27,L31,L43-L50
L52          29 S L51 AND G01N035/IC,ICM,ICS,ICA,ICI
L53         442 S L51 AND G01N033/IC,ICM,ICS,ICA,ICI
                SEL DN AN L52 4-9 29
L54           7 S L52 AND E35-E53
L55          20 S L48,L54
L56         424 S L53 NOT L52,L54,L55
```